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Manufacturers Record

Exponent of America



\$6.50 per Year.
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Baltimore, Md.
APRIL 28, 1921

[From Cover Page of Manufacturers Record of March 27, 1919.]

AMERICA'S OPPORTUNITY TO LEAD THE WORLD

"Fields of human endeavor, fertilized by the sorrows and the sufferings of millions of people, will blossom forth a richer harvest, to the betterment of humanity, than the world has ever known if the people of America are awake to their opportunity."

"This time of peace is a time of danger unless we wisely utilize it. If we make the most of the opportunity, this time of peace will mark one of the greatest eras in American history, and from the boundless prosperity which will be created here prosperity will spread to all the world and the fearful losses of the war will to some extent be forgotten in the benefits of new activities."

"If we have faith in ourselves and in our country sufficient to go ahead with construction activities, we will start a movement which will help the whole world."

"Faith begets faith, work stimulates work, confidence breeds confidence, optimism radiates optimism, and if the American people will display these characteristics now they will start the wheels of trade and commerce and industry throughout the entire world."

"It is ours to lead, ours to stay the social unrest of the world by bringing prosperity back to the world."

"We can do it. Are we ready and willing to sacrifice something in order to bring about this great achievement?"

"Every labor organization can now do the biggest work that it ever did in human history for laboring men in other countries. If labor leaders will be broadminded and urge laboring men everywhere to enter enthusiastically and wholesomely into co-operative work, into the avoidance of strikes and unwise agitation, it will be possible for them to help set the wheels in motion which will pour out a stream of prosperity to enrich all the earth and to create employment for laboring men everywhere."

"Business men have a tremendous responsibility to lead out in this work to start world prosperity."

"In every community, from the small village to the big city, public meetings should be held of business men and laboring men, of men and women of all classes, to discuss how best to stimulate local activities and to make construction work voice the patriotism and the faith in our country."

"Everything which stimulates this spirit of optimism and construction activity, whether it may be whitewashing a fence, the building of a chicken coop, or a cheap dwelling or a costly one, the improvement of sidewalks, or the building of highways, the painting of a house, the cleaning up of streets, or the construction of great hotels and factories, everything indeed which shows that the people are alive and energetic and enthusiastic should be pressed ahead."

"Into this work men and women can enter with the same degree of patriotism which they threw into war work. This work would be more than war work, in one sense, for it would be work to help to prevent other wars, a work to develop a community spirit, to create employment, to advance and beautify every town and city, and to lay a deeper and broader foundation for all the patriotism of the land and the progress of all mankind."

During 1919 and the early part of 1920 the people of this country carried out the policy outlined above. Factories hummed with work, farmers stretched the productive powers of their land to the utmost, railroads were almost overwhelmed with business, workmen were once more becoming efficient; but, blind to all these facts, the cold hand of death was laid upon the credit system of the country, and we have seen the result!

Nevertheless, all the advice given in the foregoing quotation is as applicable today as it was in March, 1919. Into credit the breath of life must again be breathed, and then America can lead the world to prosperity.

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Manufacturers Record

Exponent of America

APRIL 28, 1921

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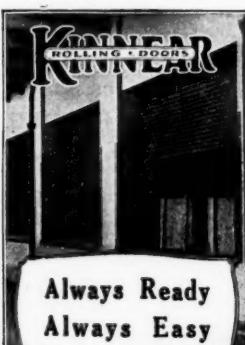
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Manufacturers Record

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of the South and Southwest as the Nation's Greatest Material Asset

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SOUTHERN BUSINESS LEADERS REPUDIATE ATTITUDE OF POLITICIANS ON THE TARIFF.

THE memorial presented to the Ways and Means Committee of the House last week by the Southern Tariff Association in behalf of 57 affiliated industries, representing virtually every line of business activity in the South, is very properly construed as an indictment of the gentlemen at present in charge of the destinies of the Democratic party, who, for partisan reasons, subordinated the welfare of their constituents to political ambition.

The upbuilding of an economic system under which the South can thrive is an undertaking to attract all men good and true, whatever their political affiliations. Tariffs themselves are essential. No party has ever denied that. The Democratic party, on the contrary, has always insisted that tariffs should be levied sufficiently high to yield requisite revenue. The revenue demands are now so great that were this historic policy of the Democracy adhered to a tariff law more protective in its incidence than any heretofore enacted would be requisite. Yet we have the party led by Mr. Kitchin into endorsement of what is the equivalent of free trade, on the theory that the cities may rally in the elections to a slogan for cheap food!

The position taken by the Democratic leadership would mean in practice that for years to come the South would be compelled to buy in a protected market and sell in a free market. That would be ruin. But it is what Mr. Kitchin and his

friends insist the Democracy stands for. We have no idea that it is a policy the South will "stand for." The business leaders of the section are aroused as never before. They object to this prostitution of their necessities to political exigencies. They see no good reason why the Democracy cannot look economic facts in the face without blinking, and stand in the open for a national tariff, in the benefits of which all sections would participate. They object to the attempt of these gentlemen, under the leadership of Mr. Kitchin, to draw a line about the South and refuse to permit anywhere within that line the beneficent operation of a national protective policy, framed to make prosperity in the agricultural districts possible.

Mr. Woodrow Wilson came back from Paris a pronounced protectionist along specific lines. We mean that he went out of his way to urge the Congress not merely to protect the dye and kindred war industries by means of tariffs, but to give them complete protection by admitting competitive goods only under license. Moreover, his Administration, after the armistice, maintained an arbitrary embargo on the importation of peanuts to protect the native market. It did protect that market, enabling thousands of farmers to earn a profit on a year's work, and there would be millions of additional wealth in the South today had that embargo been retained. The peanut growers and other producers of vegetable oils thus had, in 1919, a visible demonstration of what protection will do for American farms.

It is noteworthy that in its memorial the Southern Tariff Association exhibits the optimism which comes from conviction. So certain are its leaders of the good results to follow the imposition of equalizing tariffs that they pledge the resumption of business promptly after the enactment. There is no pessimism in their souls. "We know what is the matter," they say, "and we know the corrective process to be employed. Do as we ask, and we shall be responsible for the results." They can speak with such confidence, for they are men who are directors of industry. "The day they give us an equalizing tariff," said one of them, "that day I myself shall begin the purchase of cattle for my ranches, and I alone will buy \$500,000 worth."

The way to convince the South of the futility of free raw materials and the value of equality in competition is through actual experience. The Republican leadership is more far-seeing than Democratic control. It contemplates a nonsec-

tional tariff law, meaning a law in the benefits of which the South will freely participate, knowing that once having experienced the prosperity which fair economic opportunity affords, the South will never again voluntarily vote for a revival of hard times and unlimited competition with the Orient and the tropics. Once the South has tasted the benefits of a truly American tariff policy it will countenance no other policy, polities or no politics. Therefore, we venture to predict that men now in Congress who are opposing emergency or any relief for the farmers will live to rise in their seats and vote for the very policies they now condemn—either that or they will not be in their seats.

For years the South has quiescently accepted a policy of economic suicide because it seemed to have historic approval. It was a thing viewed as settled and beyond debate. But now, when the policy has hit producers with the fury of a hurricane, the advisability of a reconsideration has become so obvious that all over the South there is a demand for discussion, illumination, an examination de novo of the merits of an equalizing tariff. And the more the question is examined the more recruits there are to the doctrine of an American economic program. A year ago Secretary of the Treasury Houston and others were ridiculing the idea that the tariff would ever again be a serious question. But today it is a major issue. We never doubted that it would be.

There is not an important free-trade nation existing on earth today. Even England is breaking away from the fold, and India has already seen the light. How futile to expect that the South can be held in darkness indefinitely, particularly when the genius of its business direction is moving in so practical a way to show the Southern farmer where his true interests lie. Political intrigue cannot long survive business ineptitude.

IMPROVEMENT SHOWN BY CAR LOADINGS.

THERE is no more significant indication that the tide of business has indeed turned than is shown in the statement of the Car Service Division of the American Railway Association, which announces that the number of freight cars loaded with revenue freight on the railroads of the United States showed a considerable gain during the week ended April 9. The total for the week was 693,719 cars, an increase as compared with the preceding week of 27,077 cars, although it was 107,000 cars less than for the corresponding week last year and 17,000 cars less than for the corresponding week in 1919.

The loadings for the week of April 9, 1921, represents an increase over the three previous weeks. During the first two weeks of March there was a gain, but it was not maintained.

There was a gain in loading in all districts except the Central Western and the Southwestern, although the reports indicate a decrease in all districts as compared with 1920.

Increases as compared with previous weeks were shown in the loading of grain and grain products, livestock, coal, forest products and merchandise and miscellaneous freight combined, and an increase as compared with 1920 was shown in the loading of grain and grain products.

Total car loading since January 1 of this year has been 9,706,514 cars, as compared with 11,484,467 in 1920 and 9,869,739 in 1919.

STAND BY AMERICA!

THEODORE ROOSEVELT well described the American Defense Society when he stated that it "is the fighting wing of the defense movement." This is well illustrated in the American Defense Society's program for 1921, which includes the following:

To continue its campaign of combating insidious propaganda of the United Communists Party of America (the chief instigator of radicalism) by advising the employers of such activities and warning them of threatened outbreaks instigated by these enemies of our Government.

To continue to supply "pay envelope" inserts to employees to aid in bringing about a better understanding between employer and worker.

In order to make certain the continuance of cordial relations with our former allies, the society has long combated the activities of various un-American elements which seek persistently to embarrass us with friendly nations for ulterior motives.

To assist in making the Government at Washington and in the several States more effective and more economical in its administration by obtaining the adoption of a budget system.

To assist in handling the problem of unemployment which now faces the nation.

To insist that the Government shall not sanction trade with Soviet Russia.

To improve the public educational system.

The American Defense Society warns the country that Soviet Russia is sending thousands of paid agents to this country to foment revolution to overthrow the Government by violence and establish socialism. A circular signed "The United Communist Party of America," which we are reproducing, indicates the sort of propaganda that is being used in their fight against American citizens under the slogan "Down With the Capitalist Government of the United States!"

The circular, in full, reads:

"STAND BY SOVIET RUSSIA!"

"The capitalist governments of the world are fighting Soviet Russia! The French and British governments are going to send troops to kill Russian workers and peasants!

"The United States Government is sending munitions to help Poland.

"The United States Government is loaning money to Poland and the capitalist governments of Europe to shoot down Russian workers.

"Hungary and Roumania are to be armed by the Allies and sent against Soviet Russia!

"Workers of the United States—what are you going to do about it?

"The capitalist governments of the world are determined to crush Soviet Russia, because it is a government of the working class!

"But the class-conscious working class of Europe is standing by Soviet Russia.

"British, French, Italian, German and Austrian workers are refusing to load munitions and move trains carrying war supplies against Soviet Russia!

"Throw down your tools! Call a general strike!

"Show the United States Government your power!

"Show your class solidarity!

"Stand by Soviet Russia!

"Down with all the capitalist governments of the world!

"Down with the capitalist Government of the United States!

"Long live the Communist workers and peasants of Poland!

"Long live Soviet Russia!"

"THE UNITED COMMUNIST PARTY OF AMERICA."

JUDGE GARY ON UNION LABOR.

JUDGE ELBERT H. GARY in his address on the principles and policies of the United States Steel Corporation, at the annual meeting of the stockholders of the Corporation at Hoboken on Monday last, drew up and presented a sweeping indictment of labor union leaders. They seek, he declares, to undermine the very foundations of the Republic; to defy the authority of the Supreme Court; to gain dominion over all industry; to intimidate legislators; to intimidate, and, if need be, maim recalcitrant workers and employers; to bring disaster and destruction; to control even the public press; to claim exemption from the legal restraints applied to all other classes of the community. Even if the unions were justified in the long past, there is at present no necessity for them, he declares.

He offers as a possible solution of or antidote to the labor-union problem publicity, regulation and reasonable control through Government agencies. Members of commissions should be nonpartisan, nonsectarian, based on qualification and moral character. Their decisions should be subject to review by the highest courts.

Judge Gary declares that the management of the Steel Corporation has steadfastly striven to cultivate a feeling of amity with its workmen, and has been very successful.

On the question of collective bargaining, he says that he does not believe that any system of collective bargaining has been put into practice which is better than that of the Steel Corporation, or has been of real benefit to the employee or employer.

Returning to the matter of labor unions, Judge Gary points out that the Corporation does not combat, though it does not contract or deal with labor unions as such. He recites that in the United States not more than 10 or 15 per cent of labor is, or was at its highest point during the war, actually included in the unions; that labor does not voluntarily join the unions, and that therefore the assumption that union labor leaders represent labor is a mistake. He says:

"The workman, if he belongs to a labor union, becomes the industrial slave of the union. He has no power of initiative or opportunity to apply his natural mental and physical capacity. If our own shops should become thoroughly unionized and all others likewise should recognize the unions, and the steel industry should become entirely organized, as the leaders have openly attempted, then the management would be in the hands of the unions. * * * The natural and certain effects of labor unionism are expressed in three words—inefficiency, high costs. And be it remembered that in the end the general public, which is more interested in the selling price of all products, must pay for extortionate, unnecessary and unreasonable costs of production. * * *

"The end sought by labor union leaders, that at least to which their efforts tend, means disaster and destruction. It is noticeable that oftentimes they seek to control politics, and openly, as a body, advocate the election or defeat of even the President of the United States. They oppose or favor legislation of divers kinds. They would regulate police departments. They would, if possible, fill all official positions and control the existence, repeal or change of laws. Worse than everything, they would dominate the Supreme Court of the United States, our citadel of defense to person and property—to civilization itself.

"I would not intentionally do an injustice to any union labor leader, nor to a labor union. But I firmly believe complete unionization of the industry of this country, as attempted, would be the beginning of industrial decay.

"I have been informed of many facts concerning the intentions and efforts of union labor leaders in seeking, and in some cases securing, control of vital departments of industry, where possession of a small unit would mean obstruction to many other larger ones; of various devices to prevent the usual course of trade movements without apparently trying to interfere with the larger and better-known agencies. Some of you know these things. You

have seen them even in small repairs or restorations in your business places or homes.

"Many believe the labor union leaders, or some of them, would control even the public press by unionizing the typographical departments and thus bringing about censorship of publications. Such as these would, if possible, control the speech of clergymen or public teachers. They would undoubtedly expend money to employ individuals to obtain and publish misinformation that might improperly influence the public, including teachers of high standing and repute. It has been alleged that just at present there is a persistent secret movement, more dangerous, possibly more effective, to secure control of various agencies of information in the direction of extending unionism.

"It seems to me that the natural, if not necessary, result of the contemplated progress of labor unions, if successful, would be to secure the control of shops; then of the general management of business; then of capital, and finally of government."

LABOR UNIONS AND WAGES AS VIEWED BY A FARMER.

S. H. Gaitskill,

Breeder of

Shorthorn Cattle and Duroc Hogs.

Editor Manufacturers Record:

McIntosh, Fla., April 10.

I love to read the MANUFACTURERS RECORD, but I am surprised at your boldness and at your cowardice. You fight, plead and beg for the resumption of industry. You fight closed shop, yet you say, "don't reduce wages." You know the labor cost of nearly everything produced is what is causing stagnation. Take carpenters, plasterers, plumbers and all other labor connected with the building trade from \$7 to \$10 per day. Cut this cost in half and see what effect it will have on building. The bowl will be, "We cannot live on \$5 per day." Go among the business houses of Baltimore, from the little corner grocery to the largest bank, and see what wages the various clerks and hirelings get, and compare them with the building trades. Yet these clerks live, and seem to live well. Time was when \$2.50 to \$5 per day was good wages, and the men who practiced thrift laid by a neat sum for old age, and that time will come again.

More than a year ago in a letter to you I suggested the possibility of a farmers' strike. You thought it would be a great calamity, and truly it would be, but today the farmers are facing a calamity, and they are getting tired of being the greatest calamity bearers. We can, each of us, grow enough corn to keep a cow, a sow and pigs, raise our own meat and bread, milk, butter, chickens and eggs, and suffer no material loss. Today our crops are rotting in the fields because the returns to us will not pay costs of gathering and shipping, to say nothing of the costs of labor, fertilizer, etc., in their production. How much better would it have been for us if we had not tried to produce these crops for market.

Union labor has the railroads by the throat, and, like Shylock, demands its pound of flesh; and a flagman must not do any part of a brakeman's job. If the plasterer finds a lath with a loose end, he must not touch a hammer to put in a nail, but must call a carpenter.

I think it strange that union labor cannot realize that it does not cast a majority vote, and that it is fast losing the good opinion of the public, and the public will elect lawmakers that will relieve the union laborers of their special privileges.

In your issue of the 7th, page 123, on better building and trade conditions, you touch around the edges, but do not come out squarely and say the high labor cost is stagnating business. Why not say it in plain words? The farmer is getting very tired of feeding loafers and parasites. There is work, and work in plenty, for all labor that is willing to work at wages that will leave the employer a profit.

S. H. GAITSKILL.

The MANUFACTURERS RECORD has often been charged with many sins of omission and of commission, and sometimes it has been given credit for boldly expressing its views regardless of political or financial interests, or friend or enemy, or advertisers or subscribers, but we believe that Mr. Gaitskill is the first man who has ever charged this paper with cowardice. In that we think he is mistaken.

We have vigorously and persistently for years opposed radicalism in labor unions. We have denounced the efforts of radicals to control in the slavery of unionism those who might desire to work without affiliation with unions. We have constantly pointed out the fact that if farm laborers and farmers followed the hours of labor of industrial workers and limited their time to eight hours a day, this country would soon starve, or come very nearly doing so, and that the cost of foodstuffs would be many times what it now is.

We are satisfied that in many lines of work there must be a serious reduction in wages, and until this comes about the development of business will be restricted. Nevertheless, we do not favor low wages, and although union-labor leaders mislead union men, we know that there are tens of thousands of good, honest-hearted, God-fearing, patriotic men in these unions and we want to see them get as high wages as business conditions justify.

Certainly it has not been cowardice that has caused the MANUFACTURERS RECORD to antagonize the views of some employers of labor and of financial interests in seeking to break down wages. If any boldness has been required in any work of the MANUFACTURERS RECORD, it has been to go directly contrary to the views of those who have sought to break wages. We recognize, and have repeatedly said, that the wages of industrial workers are entirely out of proportion to the pay of preachers and teachers and clerks, but we have believed, and have constantly preached, that the pay of these classes should be lifted up to a higher level in order that it might be more nearly on a parity with that of the wages of industrial workers.

From the day when the railroad brotherhoods demanded the surrender of the sovereignty of the United States, and it was granted unto them by cowardice on the part of Congressmen, Republicans and Democrats alike, and of the Administration, we have denounced the Adamson Bill and the domination of railroads which has followed the enactment of that piece of vicious legislation. There must be a readjustment of wages on the railroads and a readjustment of the methods under which railroad men now work.

There are, however, many sides to this question, and one is that while we believe many wages are entirely too high, we believe at the same time that the wages paid in the past to farm laborers and industrial workers, to preachers and teachers and clerks, and the profits earned by farmers, have been entirely too small in proportion to the work which they have done for the upbuilding of the country. Under present conditions there must be a deflation of wages because there has been a deflation of credit and of business to the point that neither the farmer nor the industrial interests can maintain present wages and continue to live, and the farm laborer and the industrial laborer, like the business man, must face and accept the inevitable, which has been brought upon us by the disastrous policy of the last few years.

In a letter subsequent to the one we have quoted, Mr. Gaitskill asks "How is it that Germany can produce goods at so much less cost and make good dividends?" And he adds that "Possibly the German laborer is more patriotic than the British or American laborer."

The situation in Germany is due to the fact that the German laborer is working harder and longer hours than the laborers in Great Britain and the United States, and he is paid a rate of wages which would mean the destruction of civilization if it prevailed at the present time in Great Britain and the United States. Under the exchange system which is controlled by the German Government a tremendous premium is put upon exports and the highest kind of a tariff

upon imports. This, and the readiness of the German laborer to work under the domination which controlled him during the war, is responsible for the conditions prevailing.

Mr. Gaitskill also calls attention to the fact that the farmers in his section are paying \$1.25 per day to farm laborers, while the negro firemen and brakemen working in the same section are getting over \$200 per month each, and he asks "How long do you think the farmer can continue to produce? The farmer worked hard—night and day, almost—making food to help win the war. The labor union caught Congress and the President by the throat and said 'Sign the Adamson Bill or we will choke you to death. We don't give a d—n if Germany does overrun France. We must have our pound of flesh, even if we take blood with it.' * * * 'And if you will analyze your line of argument you will find that it applies to unionized labor."

This statement is fairly accurate, for during the war there were about 6000 strikes by union labor, and in the aggregate 2,000,000 men were engaged in strikes, while 2,000,000 Americans were jeopardizing their lives in France to save the world. We have stated these facts over and over again, and have begged our readers to remember that during the war the Administration permitted Samuel Gompers to dominate the wage question of all laborers employed by the Government, and that the Government at that time encouraged slackers on the part of union labor while paying exorbitant wages.

Mr. Gaitskill also wants us to tell him "why the farmer must labor from sun to sun, 'and then some,' to make cheap food for these men that want to work short hours and then go to the movies. They should be made to take part in the farmer's movies."

If Mr. Gaitskill and all the other farmers of the country will unite to prevent politicians of high and low degree from yielding to union labor, then, perhaps, his wishes may be achieved.

AGAINST THE BORAH BILL.

THE MANUFACTURERS RECORD has had its attention drawn to the "Borah Bill," entitled "To protect persons in the exercise of certain privileges and immunities guaranteed and secured by the Constitution of the United States." We thought the Constitution fully guaranteed and secured the protection of law-abiding citizens of the United States. There is no need for further legislation on the subject. It is pointed out, however, that to grant "certain privileges and immunities" may perchance mean the license to destroy our Government, as suggested in the following letter written against the bill:

"This is exactly the sort of bill that the communists, the I. W. W., the anarchists and Reds generally, including the Red criminal element in the labor unions, would like to see passed. It would lessen the efficiency of the Secret Service by at least 80 per cent, and would very effectually intimidate its operatives. One might imagine that it had been drawn by counsel for the Reds—some such man as Recht, Margolis, Ralston or Weinberg. It is a thoroughly vicious and unpatriotic measure, though it is plausible enough to appeal to the parlor Bolsheviks, the foolish college professors, the well-meaning pinks and others of that class. In its last clauses it seeks to hold over the heads of those fighting against the Reds summary suits for damages, while our laws already provide for ample recourse for damages for anyone who may suffer. The measure is thoroughly vicious, and should be exposed as such."

This is indeed an arraignment that cannot but cause the honest citizenry of this country to think deeply on a question that involves any possibility of making less effective the laws enacted for the protection of our Government and its law-abiding citizens.

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UNITED STATES HAS OVER HALF OF THE COAL RESERVES OF THE WORLD.

THE recent crisis in the British coal-mining industry brings up the question as to the power and extent of "Old King Coal's" domain. Assuming, as has often been pointed out, that those countries which will dominate the world will be the ones owning or controlling their coal and iron resources, there need be no fear of the future of the United States, provided it properly maintains control of what it has. For in the statistics on the mineral resources, with special reference to the British Empire, compiled by the Imperial Institute, London, it is found that the United States has actual and probable coal reserves of 4,230,200,000,000 short tons, which is 51 per cent of the world's probable coal reserves of 8,152,103,600,000 short tons. These figures are so stupendous it is practically impossible to comprehend their meaning, but all of us can take in the fact that we have over half of the world's actual and probable coal reserves. In fact, the United States has more than six times the coal reserves of Continental Europe, including Germany's probable reserves of about 466,500,000,000 tons, more than 20 times the coal reserves of Great Britain and Ireland and more than two and a half times the probable coal reserves of the British Empire, including Canada's estimated reserves of 1,360,164,000,000 tons.

Next to the United States the British Empire possesses about 23 per cent of the total coal resources of the world, as given by the British Information Service of the Bankers' Trust Co. of New York. Great Britain produces about 20 per cent of the world's output of coal, while the United States produces about 40 per cent.

The production of coal, 1913 and 1919, in three principal coal-producing countries was as follows:

	1913. Short tons.	1919. Short tons.
Great Britain.....	312,916,000	257,396,000
United States.....	576,054,000	544,112,000
Germany	37,049,000	231,759,000
Grand total—all countries.....	1,477,782,000	1,289,346,000

In the accompanying table compiled from The Coal Resources of the World, 1913, the actual coal reserves of the British Empire are given as 616,724,500,000 tons, 457,031,000,000 tons being Canada's proportion, while Great Britain and Ireland are credited with 155,382,000,000 tons. The probable total reserves of coal in the British Empire is reported at 1,905,473,000,000 tons. China comes next with probable coal reserves of 1,097,136,000,000 tons, which explains why Japan is so solicitous of that country's welfare.

The estimated total actual and probable coal reserves of the world by countries is as follows:

	Probable	
	Actual reserves. Short tons.	total reserves. Short tons.
Great Britain and Ireland.....	155,382,000,000	208,865,000,000
Canada.....	457,031,000,000	1,360,164,000,000
Newfoundland	551,000,000	
Australia	2,456,000,000	182,460,000,000
New Zealand.....	1,089,000,000	3,732,000,000
British North Borneo.....	5,500,000	83,000,000
India	359,000,000	87,059,000,000
Africa	402,000,000	62,559,000,000
Total British Empire.....	616,724,500,000	1,905,473,000,000
United States.....	3,550,000,000,000	4,230,200,000,000
Germany	113,647,000,000	466,538,000,000
Austria-Hungary	16,647,000,000	61,263,000,000
France	4,820,000,000	19,376,000,000
Belgium	12,122,000,000
Russia	76,000,000	66,237,000,000
Spain	6,821,000,000	9,662,000,000
Spitzbergen	9,643,000,000
Netherlands	230,000,000	4,851,000,000
China	20,497,000,000	1,097,136,000,000
Japan	901,000,000	8,787,000,000
Manchuria, Siberia.....	450,000,000	192,945,000,000
Indo-China	22,042,000,000
Other countries.....	3,056,000,000	45,740,000,000
Grand total—world.....		18,152,103,000,000

*Does not include 88,000,000 tons given as low estimate for S. Nigeria.
Include S. Nigeria.

The United States is doubly fortunate in the fact that of the enormous "probable" stores of coal, about nine-tenths of the total estimated original reserves of 3,550,000,000,000 tons, is said to be not deeper than 3000 ft. However, we must realize that our really high-grade coals, semi-bituminous and anthracite, amount to only about 15 per cent of the available coal reserves of the country.

COSTA RICA CENTENNIAL OF INDEPENDENCE OFFERS AN OPPORTUNITY TO AMERICAN BUSINESS INTERESTS.

A BUSINESS man having intimate knowledge of Central American business interests, in a letter from New Orleans to the MANUFACTURERS RECORD, writes as follows:

"I wonder whether you have heard that Costa Rica will celebrate on September 15, 1921, the first centennial of her independence by means of functions of a social nature, in combination with an exposition which will include departments dedicated to agriculture, and the allied arts, fisheries, textiles, chemistry, metallurgy, mechanics and electricity, photography and cinematography, hydraulics, leather and rubber industries, minerals, including ceramics; lighting, heating, ventilation, woodworking industries, paper and printing, clothing and modes, jewelry, surgery and medicine; music, games, pedagogics, industrial and decorative arts, religious objects.

"All exhibits are to be consigned to a committee which becomes responsible for their safety, and this committee will, if desired, sell the articles for account of the exhibitor, deducting the costs plus a commission of 5 per cent. The address of the committee is San Jose de Costa Rica, Costa Rica.

"It is strange that no mention seems to have been made of this exposition in this country. The consul at Costa Rica here is aware that the exposition is to be held, but has no literature nor any advices from his Government regarding it. It might be well to ascertain what the consul at Baltimore has to say about it. In Spain the notices refer to it as an 'exposicion Espanola,' which augurs Yankee exclusion. You know that for a long time Germany has been trying to terrorize the Spanish manufacturers (in Spain) so as to enable them cheaply to buy out Spanish interests, and I understand that large holdings have passed into German hands, the companies outwardly remaining Spanish and bidding for Spanish-American trade as Spanish firms. I suspect that this Hispanic exposition, if it is being fostered as a Hispanic love-feast, will develop an odor of sauerkraut if you get close enough to it. You will be interested in following this up, and trying to force the entry of American manufacturers into the exposition. We had a great deal to do—indirectly—in helping Costa Rica to achieve her independence, and it was only the other day that Mr. Harding bade Panama abide by her award and surrender to Costa Rica the lands that were hers. There is no reason why we should not be participants in the celebration of her independence. There is a mystery about this, and I strongly suspect the wily Teuton."

IMPORTANT COTTON CONFERENCE IN NEW YORK MAY 30-31.

THE American Cotton Association has called a National Consultation Conference of American cotton interests to be held at the Hotel Pennsylvanian, New York city, May 30-31. The main purpose of the conference is to present every angle of the cotton situation and let the people of the North know the truth and the place cotton holds in the commerce and finance of the nation. The date selected precedes the sailing, June 1, of the American delegates to the World Cotton Conference in June at Liverpool and Manchester, England.

The meeting in New York will enable the delegates to receive the benefit of full and free discussions on subjects of vital importance to the American cotton industry. The tentative program outlines broad discussion of: The cotton crop of 1921; world demand; financing and marketing the surplus crop of 1920; foreign credits; exports of raw and manufactured cotton products, etc. Addresses will be delivered by leading Government officials, growers, exporters, manufacturers, financiers, merchants and publicists of national standing.

WHAT WOULD HAPPEN IF FARMERS ADOPTED LABOR-UNION TACTICS?

If the farmers of the country should ever decide to follow the example of labor unions, the cost of foodstuffs would very quickly be doubled, and possibly trebled. The farm laborer does not know any eight-hour-a-day business. He does not know any union organization which tells him when to work and when to loaf, and how to reduce efficiency. But this is the part of the program of the labor unions of the country. Their scheme in general is to reduce labor to the lowest number of hours. Many of them, not satisfied with eight hours a day, are beginning to insist that these shall be reduced to six hours, and afterwards to five hours; and some of them are carrying their claim to the absurd point that two days a week is sufficient for all the work that is to be done.

However extreme may be the latter view, it is universally known that the whole tendency of labor unionism is to reduce the working hours and to prevent the men from giving their best honest service. The man who reduces his efficiency in order to lessen his output is robbing himself of all right to claim honesty; is robbing his fellow-men, and is robbing all society.

If the farmers should adopt the doctrines taught by the labor unions, we would soon have a very chaotic condition, and the labor-union people would find it exceedingly difficult to buy foodstuffs of any kind at any wages.

A very suggestive presentation of this phase of the question of labor has been presented by Hon. Jonathan Bourne, Jr., president of the Republican Publicity Association, in which he indicates what would happen if the farmers and the farm laborers of the country adopted the tactics of union labor and organized themselves into "The Amalgamated Association of Agricultural Assistants." The result would be, according to Mr. Bourne's interesting presentation, about as follows:

- "1. A basic eight-hour day.
- "2. Time and half for overtime.
- "3. Double pay for Sunday work or work on holidays.
- "4. Only members of the A. A. A. A. in good standing shall be employed.
- "5. Employers shall deduct dues from wages and pay the same to the local branch of the A. A. A. A.
- "6. The work of an agricultural assistant shall be limited strictly to ordinary care of crops, livestock, etc.
- "7. For any work other than that of ordinary care to crops and livestock, an agricultural assistant shall be paid the compensation that would be due a specialist. For instance, for repairing a pump, an agricultural assistant shall be paid the wages of a plumber; for giving medicine to an animal, he shall be paid the compensation of a veterinarian; for mending machinery, he shall be paid the compensation of a blacksmith.
- "8. In no case shall an agricultural assistant be permitted to perform work other than ordinary care of crops and livestock if a specialist can be secured, and, if work be so performed, the agricultural assistant shall be entitled to receive not only the compensation of a specialist, but also the cost the farm owner would be required to bear in securing the aid of a specialist if one were available.
- "9. Breakfast shall not be served more than 30 minutes before the beginning of the eight-hour workday, and the agricultural assistant shall not be called earlier than 15 minutes before time for breakfast. Violation of this rule shall entitle the agricultural assistant to double pay for the period of time he shall have been constructively on duty.
- "10. Each agricultural assistant shall be attended by a helper whose duties shall be subject exclusively to the determination of the agricultural assistant.
- "11. Controversies over the manner in which work shall be performed or involving interpretation of the rules shall be referred to the walking delegate of the A. A. A. A. whose decision shall

be final, pending which decision the farm owner shall recognize the contention of the agricultural assistant."

This statement is not at all overdrawn. It only indicates what is taking place constantly among union-labor men, and it shows the absurdities to which they have carried their cause. Nothing that has been suggested by Mr. Bourne for the plans of his proposed Amalgamated Association of Agricultural Assistants is more absurd than are the acts and the rules and the regulations of railroad brotherhoods and of many other labor organizations.

GERMANY'S WILFUL DESTRUCTION OF INDUSTRIES IN FRANCE AND BELGIUM.

Some Americans with maudlin sentimentality are thinking that the Germans are heavily burdened because of the reparation demanded by the Allies. Men who are so benighted should study the facts recently made public by Lloyd George. In an address on March 3 to the German delegates who were by hypocrisy trying to escape even a small part of a just penalty which should be imposed upon Germany, Lloyd George pointed out that Germany was not even being asked to pay any proportion of the expense of the war by France and England and other countries to save themselves from German aggression. They simply insisted that Germany shall pay reparation to the allied countries for the damages to property and industry and for the damages inflicted upon the lives and limbs of the inhabitants. "France," said he, "in her budget has arranged for an expenditure of 12,000,000,000 francs toward restoring her devastated areas." This is separate from the gigantic sum she has to provide for pensions. This provision will have to be made year by year for at least 10 years.

Turning then to some other figures showing the crimes that Germany committed in the destruction of industrial plants in France, Lloyd George pointed out that the German armies had destroyed nearly 21,000 French factories. The mines in Northern France that were destroyed will take 10 years or more for re-establishment. The whole of the metallurgical, electrical and mechanical factories in the devastated area have been wiped out. Four thousand textile factories and 4000 food factories were destroyed or stripped of their equipment, which was either taken away to Germany or destroyed on the spot. Three hundred and nineteen thousand two hundred and sixty-nine houses were completely destroyed and 313,675 partly destroyed. Nearly 5000 bridges and 53,000 kilometers of road are among other things that were wrecked by Germany. A good deal of this devastation was wrought through bombardment, but an incredible amount of damage was done deliberately, with a view to destroying essential means of production and transportation.

General Von Bissing at the first meeting of the German Economic Mission to Belgium on June 19, 1915, said, "The object being to provide that Belgium's recovering industry should not prejudice German industry." And Von Bissing told how great factories were wantonly destroyed and apparatus destroyed by oxy-hydrogen flames in order to cripple French and Belgian industry and make it impossible for them to compete with German industries when the war was over. Machinery and equipment were broken up in order to furnish Germany with metal. Many mines in the north of France were destroyed, not by bombardment, but by deliberate acts, with a view to making it impossible that they should be worked for years.

These facts are but a few of many which could be given emphasizing the statements made by Lloyd George. And Germany is only asked to pay for this kind of destruction and for the deaths of the soldiers who died in stemming the rush of barbarism against civilization. If Germany were not

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a nation of liars, sneaks and hypocrites, its people would long ago in sackcloth and ashes, have repented of their effort to destroy and loot the world and they would be willing to go to the uttermost stretch of their power for generations to come to atone for their crimes.

Germany is still the same Germany as of old; still eager for the chance to dominate and loot the world. Its propaganda of evil is being carried all over the world. Its business interests have been combined on enormous plans, backed by the German Government, for the express purpose of breaking down the key industries in this and other countries one by one, hoping in this way that the time will come when Germany, with its chemical warfare, can carry out its intentions temporarily halted by our unspeakable blunder in bringing about the armistice. The people of America need to be on their guard.

A SOUTHERN COTTON MILL COMPANY SETS A GOOD EXAMPLE.

BELIEVING that business should be a part of a man's religious life, and that his religion should guide his dealings with his fellow-man, the Clayton Cotton Mill Co., of which Mr. Charles W. Hearne is president, at its last annual meeting invited the Rev. C. A. Jenkins to open the meeting with prayer. The Charlotte Observer reports Mr. Jenkins' prayer to have been as follows:

"Our Heavenly Father, these men have gathered here to transact their temporal affairs, in which Thou art ever concerned, for Thou thyself hast ordained industrial pursuits. In the beginning Thou didst charge the first man to till the ground. On Sinai Thou didst command men to work six days in the week. The wise man, moved by inspiration, said, 'Whatsoever thy hand findeth to do, do it with thy might.' Thy beloved Son taught us to trade and get gain with our pounds and talents, and to use the banks when we cannot stand alone. He was Himself a carpenter, a man of the shops, producing plows and yokes to make the fields white unto harvest. Our Lord also taught us that in Thy gracious Providence business will continue to the end, and when it comes, two shall be grinding at the mill.

"Thus, it is Thy will for the world's welfare to circle around mills, factories, shops and plows. When business languishes, mankind suffers, children starve and famine and pestilence follow. We pray Thee, then, that the dark cloud which rests on industry may pass away, and that a brighter day may dawn, whose sunshine may gladden the hearts of men, for prosperity in the mill seems to be Thy way to provide not a few of Thy creatures with medicine, food, raiment and shelter.

"We pray Thy rich blessing on the president and other officers of the plant, the directors and stockholders. Grant them Divine guidance and wisdom so to perform their duties as to secure the largest rewards. We would especially invoke Thy grace upon all employees. We bless Thee for the kindly feelings and fair dealings existing between the plant and its employees, thus preventing discontent, strike and riot. May this happy state be unbroken in the future as in the past.

"Now, be pleased, O Lord, to accept our gratitude for the many and signal successes of the years gone by, which have made the mill a benefactor to the community and a power for helping the whole country to bear the burdens of humanity.

"Forgive our sins, correct our mistakes, forget our failures and help us to develop our best energies to advancing the cause of our Master. In Jesus' name. Amen."

Imagine for a moment what it would mean for peace and harmony and good-will between employers and employees, between competitors and all others, if the spirit of that prayer were in evidence in every office and every workshop

in the country. How would it be possible for bitterness and hatred, strikes and riots to exist where men went to their daily tasks as employers or employees, as sellers or buyers, or as competitors for trade in the spirit that recognizes that all honest work, all honest business is a part of Almighty God's plan for humanity, and that he who shirks his duty to employers or employees is a traitor in the greatest war the world has ever known—the war of Evil against Good?

"I am a Christian and will not shirk or loaf on my work," said a carpenter who had been urged to do as little work as possible in order to lengthen out the job.

How soon will the time come when Christian men, whether they be employers or employees, will be open and frank and courageous enough to set the world a good example by making their religion a part of their business, and their business a vital part of their religion? Not until that time comes will we have peace and friendship among men; not until then will business be founded on a rock. Now it rests on shifting sands of the socialistic, anarchistic, irreligious winds that sweep across the world, and are liable to sweep it to destruction.

Religion and religious questions may appropriately, therefore, be stressed in the columns of every business paper in the land.

May the time be hastened when all business and all labor organizations will be moved to follow the example of the North Carolina cotton mill, and may every minister be as sane and sound and as true to true religion as the one who uttered the prayer we have quoted.

NEED OF AN INDUSTRIAL RESEARCH INSTITUTE FOR GEORGIA AS SEEN BY DR. RAYMOND F. BACON.

ONE of the projects under discussion at a recent conference of industrial leaders at Macon, Ga., was the establishment in Atlanta of an Industrial Research Experiment Station, to which the industrialists of Georgia and the South could bring their problems for solution. In discussing this project Dr. Bacon, who is director of the Mellon Institute of Industrial Research of Pittsburgh, said, in part:

"Suppose I came to you as a mining engineer and told you that there was a very large and rich gold deposit on the outskirts of Atlanta. Suppose I told you that with my assistants I had measured and assayed the ore; that I had found enough ore to last well beyond our lifetime; that I had tested the milling processes and found that the ore could be worked at a large profit. Suppose you consulted several other experts in this field, and they all gave you the same report. Suppose I and the other experts all referred to the fact that similar ores have been worked with large profit in other localities. Suppose that these experienced engineers told you that all that was necessary was for you to furnish a relatively small amount of capital to provide the necessary installation and working capital, and that the return would cover this initial expenditure in two or three years after starting, and that in future years the annual returns would increase to almost fabulous amounts. Would you be interested in such a proposition?

"Modern industrial research for a State with the great natural resources of Georgia is just such an investment. I use the word 'investment' advisedly, for industrial research is no longer an experiment. Properly conducted, it pays in dollars-and-cents values. The natural resources of Georgia are comparable in value to those of the State of Pennsylvania, and in the war Pennsylvania furnished over half of all the great tonnage of war supplies used by our army. The quickest and surest way for Georgia and the South to be able to utilize its great potential wealth is to have a modernly equipped and efficiently staffed industrial research station, where information as to how most profitably to work the natural resources for local conditions can be obtained. The clays, the hides, the ores and the marbles are at hand, but at present, all too often, the Georgian must purchase from the manufacturer in other States his dishes and pottery; his shoes, harness and automobile covers; his bricks and building material; his sculptures—and his tombstone."

MAY 1 "AMERICA DAY."

THE American Defense Society, Inc., of New York proposes to hold on May 1 an "America Day" celebration. Writing of this to the MANUFACTURERS RECORD Mr. R. M. Hurd, chairman of the Committee on Arrangements, says:

"Since 1918 the American Defense Society has celebrated through its members and branches all over the country patriotic meetings on May 1 with a view to offsetting the propaganda of the radicals. This has been called 'America Day.' May 1 can thus be most advantageously utilized as the occasion of a program of public activities as well to show how we can preserve our Americanism against the sinister infiltration of anarchy and lawlessness, as also to afford an opportunity for all patriotic citizens to reconsecrate themselves to the ideals and institutions of our nation, and to pledge their unqualified support of all those things that have made us a great and united people.

"The forces which threaten our Government today are symbolized by the red flag, whether they marshal in the name of communism, I. W. W.-ism or bolshevism. They stand for one and the same thing, namely, a deep-seated conspiracy against civilization. This is no time for hesitation. We believe that a mobilization of patriotic Americans on May 1 will be a great discouragement to the disloyal propaganda with which the Communists now strive to destroy our free and independent nation. Let us at once set in letters of quenchless fire the words of Lincoln at Gettysburg that the Government 'of the people, by the people, for the people' may not perish from the earth.

"You may be interested to know that at the first celebration held of 'America Day' President Harding was our principal speaker in New York city at Carnegie Hall."

It would be well if in every community of the entire country similar meetings should be held on April 30 or May 2, as May 1 is Sunday, even though the time is short in making preparations for such a celebration. We believe, however, that quick action on the part of commercial organizations throughout the country and of patriotic Americans generally would make it feasible to hold a public meeting in practically every community of the country.

The suggestions made by Mr. Hurd are timely and should be given prompt attention, for we are facing issues equally as dangerous as those which threatened this country when German barbarism was in sight of Paris.

THE RISK OF SUICIDE IN SO-CALLED WHISKEY.

THE Birmingham Age-Herald has done a good service to the country in a recent editorial showing how rapidly whiskey drinkers who are willing to take any chance in violating the law are being eliminated from any further interest in earthly affairs. And this condition is doing a great deal to make every man afraid to drink, it matters not how many oaths may be piled upon oaths to prove that the stuff that is offered to him is genuine.

The Age-Herald says that at a stag dinner held at the home of a Birmingham citizen "several participants are said to have brought bottles as a contribution, for it was more or less of a business dinner on a matter of import to Birmingham." One citizen is said to have dubbed his contribution "T. N. T." It was concocted and had the same effect upon the "swallow" of a man that lightning has upon the bark of an old and stately oak. "One man pronounced the kick extremely effective and took a second portion. Within three days thereafter the funeral was largely attended."

Only recently, said the Age-Herald, a splendid Birmingham man offered the writer of the editorial a drink of "very fine old bottled-in-bond whiskey," which he had just bought from a man who had brought it up from Savannah. The offer was declined, "but the next day the man who had offered it opened the bottle and took a drink. Within half an hour

thereafter, though the best physicians were called in, he died in convulsions after leaving verbal warning to his friends not to take anyone's word as to what was whiskey."

A prominent manufacturer of Birmingham had a bottle of supposedly "bottled-in-bond" at his home. A number of ladies and gentlemen partook of fruit punches made of it. Within an hour every participant became ill.

"Yesterday's Age-Herald," says the story, "told of an analysis of whiskey which killed a strapping big man and a good citizen of Birmingham whom everybody liked. This man was not a regular drinker, but a friend from Northern Alabama brought in a bottle of moonshine and persuaded the Birmingham man to take a drink. He took two drinks, and he was soon in convulsions, and was buried three days later. A friend who was with him took one drink, and he has just gotten out of bed as a result." An Age-Herald reporter got the remains of what was in the bottle and had it analyzed by an expert chemist. It was found to contain 27 per cent of deodorized wood alcohol, a deadly poison.

Some of the soldier boys recently in camp near Birmingham bought a half gallon of moonshine and were planning for a rousing time when the captain found out about the matter and warned them that it was probably a deadly poison. "To prove it he had the boys catch a stray cur and a teaspoonful was poured on the dog's tongue and his head held up so that he had to swallow it. In 15 minutes the dog was dead."

The Age-Herald reports that some printing shops are turning out counterfeit Government labels smeared with dirt and water to give the appearance of age, so that no one knows what he is getting when he buys what is claimed to be whiskey. As a remedy the Age-Herald suggests "the hangman's noose for every man who puts wood alcohol or any other deadly poison in a bottle alleged to contain whiskey."

The story of the Age-Herald is being repeated in many places. Every concocter of so-called whiskey or moonshine is trifling with human life, and is indeed a murderer in heart and often in act. Every man who drinks the stuff is running the risk of committing suicide, and, according to the reports to the daily papers, the suicide club is growing with amazing rapidity by reason of the fact that some men are perfectly willing to risk death and the lower world for the privilege of putting the accursed stuff in their stomachs.

Very rapidly the number of drinkers is being lessened by those who are murdering themselves in order to gratify a depraved appetite.

Plan Organizing District to Reclaim 185,000 Acres of Delta Land.

Memphis, Tenn., April 22—[Special.]—Preliminary plans have been completed for the reclamation of the Holmes, Humphrey and Yazoo drainage district of Mississippi. The report has been made to Judge V. K. Strickler, chancellor of Yazoo county, for the purpose of organizing the territory into a drainage district.

The proposed district contains approximately 185,000 acres of alluvial delta land lying in that part of the three counties between the Yazoo River and the foothills which form the eastern border of the delta. In the section are many old lakes, river channels and bayous, with high banks, now largely in cultivation. When the river is in flood the lowlands are overflowed, and the many streams which come from the east often overflow the land near the foothills. To protect this big area the land must be shielded from river floods, the foothills must be controlled and provision must be made for removing the water which falls on the land in the district.

The proposed plans call for a levee along the river and an interior canal to connect the existing bayous, channels and drain out the excess water. This will permit of the use of more than 100,000 acres of land that are only used in a small way at present.

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A Protective Tariff Demanded by the South

[Special Correspondence Manufacturers Record.]

Washington, April 20.

With the rallying slogan that a flood of cheap imports are wrecking the markets of the United States, one hundred or more delegate representatives of the Southern Tariff Association met here this week to urge and insist upon the passage by Congress of a tariff bill so amply constructed as to provide a reasonable degree of protection and benefit to all American industries which are founded and flourish upon high-paid and intelligent American labor. Eighteen Southern and border States were represented in the gathering, whose presiding officer was John H. Kirby of Houston, Tex. The 100 or more delegates represent every productive industry of the South, whose representatives felt that that section had been too long neglected in the constructive benefits of tariff legislation against the labor pauper production of foreign countries. A notable feature of the meeting was the farmer representation, which is clamoring for recognition equal or on a par with that which has been heretofore accorded to American manufacturers. The association presented a memorial to the House Ways and Means Committee, after which the representative members called in a body at the White House to present their case to President Harding, who in his message to Congress stated that the agricultural interests of America were entitled and should receive as much consideration at the hands of Congress as great manufacturing industries. In the memorial which was presented to the Ways and Means Committee of the House the association set out these salient features:

To the Ways and Means Committee
of the House of Representatives:

The Southern Tariff Association represents affiliated industries from Alabama, Arizona, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia—18 Southern States. The number of these affiliated industries is 57, embracing virtually every line of activity in the States mentioned, as follows:

Agricultural: Cottonseed and vegetable oils, cattle, sheep and wool, goats and mohair, Egyptian cotton, citrus fruits, honey and beeswax, onions, peanuts, grain, cane and sugar, rice, potatoes, hides and skins, tobacco, dairy products, lumber, naval stores, poultry. **Manufacturing:** Cotton goods, flour milling, saddles and harness, chemical dyes, glass, burlap, penholders, hair cloth, slaughtering and meat packing, pencil leads, epsom salts, macaroni, fertilizers, fish oil, furniture, foundry products, wood pulp, iron and steel, shoe manufacturing, potato, flour and starch. **Mineral:** Asbestos, barium, barytes, bauxite, cement clay, feldspar, ferro alloys, gypsum, graphite, marble, monozite, manganese, mica, potash, pyrites, quicksilver, sulfur, talc, zinc.

These industries represent two-thirds of the wealth of the South, and have directly dependent upon them two-thirds of all the inhabitants. Unless these industries function and prosper, the 18 States in which they are situated must rest commercially stagnant, their business inert and their progress definitely halted.

The whole Southern territory is now in the throes of an economic disaster of unparalleled intensity. It has been in this condition for many months. Agriculture, the great basic industry, lies prostrate. The acres are among the most fertile on the earth, but the owners of them are besought by bankers and by merchants, by statesmen and by economists, to let lie fallow the lands that for a hundred years have clothed the world. With unanimity they are advised against the vast production of which they are capable. The wealth that can be created must not be created because there is an economic status which impoverishes a whole people as a penalty for thrift in the fields. Nor in the vast production of edibles is the situation different, since a flood of foreign and competing goods is pouring into the ports, destroying markets and depriving agriculture of any possible profit. Equally stricken are the stock and wool industries, so vital to the sustenance of the nation.

Not less alarming is the status of the manufacturing industry. The great textile establishments are either closed or are working on part time. The glass industry is not functioning. The dye industry, an essential element in the national defense, is threatened

with paralysis. It would be difficult to decide which branch of manufacturing is in the worse condition.

The mineral industry is to all intents and purposes entirely inoperative. During the war the necessities of the conflict revealed hidden sources of essential minerals in Southern territory, the development of which promised not only a substantial increase in the national wealth, but sure elements of defense in the event of war, going far to determine the complete self-sustenance of the nation. These industries are on the verge of extinction.

We cannot acquiesce in the conclusion that these alarming and ruinous conditions are wholly the result of natural laws, against which it would be folly to contend and to prevent the operation of which would be futile. On the contrary, we are convinced, and are prepared to prove, that the economic disaster is the consequence of forces the hardness of whose compact can and ought to be softened by the intervention of the Government, impartially made operative. Not only are we convinced that these forces have facilitated domestic trade paralysis, but it is our firm belief that unless they are controlled immediately conditions, if possible, will become progressively disastrous, with widespread bankruptcy, unemployment and civic restlessness. A flood of cheap imports is wrecking the markets.

We favor, therefore, the immediate enactment of such tariff schedules as will equalize the cost of production in this country with that of foreign countries, and that will take up the differentials, now favorable to foreigners, in exchange and transportation costs, so far as may be consistent with the public welfare; such schedules to be so placed as to distribute fairly the burdens and benefits among all industries, without discriminating against any section, class or product, to the end that there may be maintained American standards of living in every line of effort.

We respectfully call the attention of your committee to the fact that there is an economic emergency comparable in its immediacy and potential destructiveness to any military exigency with which the nation has been confronted. The World War has no more violently disturbed the geographical status of the world than it has changed the economic map. The wealth of centuries has been swept away in great sections of the earth. This has resulted in a credit famine which necessarily expresses itself in lower standards of living and reduced costs of production abroad. A decade ago there was hope that an equalization of production costs might be anticipated by higher standards of living in other nations, but the great war has postponed that expectation, and relief can be effected now only by the imposition of tariffs sufficiently high to afford real equalization. The competition of pauper production, in its several degrees, impoverishes those who attempt to meet it, and all alike, in such circumstances, are joined in promiscuous ruin.

This situation is aggravated and intensified by a breakdown in exchange. In several of the countries which are flooding or are threatening to flood this country with their cheap goods the purchasing power of their unit coin at home is three or four times as much as the cost of the same unit in international exchange. The effect is to give each of these countries a prohibitive protection against American products, while it serves as an actual bonus on exportations to America.

The South comes into competition agriculturally with the cheapest labor on earth. Her products are the products likewise of the Orient and semi-tropical nations, where living conditions are such that labor is the cheapest of all things. The South has been paying, and would like to continue to pay, an American wage to those who toil in the fields, as well as those who labor in the factories and mines, but it cannot pay five or ten times the wage that is paid by foreign competitors and economically survive.

Each of the industries signing this memorandum is submitting to your committee severally and independently a specific statement of its condition, together with statistical tables which reveal the actual difference in cost of production in this country and in foreign countries. These figures are based on actual market quotations and on other information which it has been possible to col-

lect. The emergency has developed so rapidly that the investigating agencies of the Government, such as the United States Tariff Commission, have been unable to secure reliable statistics up to this time, nor is the Tariff Commission in a position, we are informed, to make an investigation within such time as is available. We respectfully suggest to your committee, however, that the figures which each of the affiliated industries is submitting is subject to substantiation either by witnesses which each particular industry can provide or by additional information now being procured. The schedules suggested represent in every case the minimum levies which practical men in the industries involved feel will permit them to do business on an equality with foreign producers, but with no advantage over them.

We regret that we cannot visualize for your committee the widespread devastation which has been spread over the South by the flood of imports. No words can paint the picture. The breakdown in the cottonseed market alone is known to have taken more than 25,000 children away from country schools. Additional thousands have been compelled to withdraw from other institutions of learning. Banks find their commodity collateral no longer sufficient to guarantee loans made. Scores of financial institutions, chiefly serving rural communities, have been forced to suspend operations. Thousands of farms have been abandoned. Others are so mortgaged that it will be years before they are released. Innumerable mines are shut down and tens of thousands of men are out of employment. Factories that thrived with life a year ago are deserted, or nearly so. Thousands of cattle, essential to the national life, have been hurried to the slaughter-houses or are being trekked into foreign territory. It is as if an epidemic, contagious and infectious, paralyzing all enterprise, initiative and progress, had swept over the land.

In these circumstances, we urge upon your committee the necessity of immediate relief. The disaster is progressive. It will not do to stay it months hence. With all the emphasis of which we are capable, we urge that relief be given now, at once. Our people are convinced that it is within your power, by the imposition of equalizing tariffs, at once to control the catastrophe and restore economic virility. The unemployment is promoting social unrest. Even brave men fear to go ahead, for they are ignorant of the conditions under which they must do business. They cannot contract with assurance. They cannot arrange for production while there still hovers over them the actuality or the probability that foreigners will meet them at their doors with similar goods at prices far below the domestic cost of production, omitting all thought of profit. There are establishments in which the fires are kept burning low, at heavy loss each day, in the hope and expectation that speedily and without delay the Government will interpose its mighty arm in defense of its industrial establishment and levy the customs imports which alone can revive activity.

We respectfully urge upon you, therefore, in this grave emergency, that the customary processes of legislation be reverted, and that by joint resolution or otherwise the Congress make immediately operative such tariff schedules as your committee may recommend as desirable, subject to modification, upward or downward, as subsequent full investigation may show to be wise. We urge that you act first and investigate afterwards. The essential information is already available, the minutiae of detail can later be assembled.

In full appreciation of actual conditions, we pledge you that we can and will set the wheels of industry in the South to moving almost immediately following the granting by you of the relief we seek. Among our members are those who intend to become active at once. They are leaders in their respective industries. One man alone, who has been forced by economic necessity to send thousands of cattle to his Mexico ranches, is prepared, on the enactment of suitable legislation, to invest not less than \$500,000 promptly in the purchase of cattle. Others are prepared to open their closed glass factories, their shut-down mines, their silent factories of all kinds. Agricultural leaders also have yet time to prepare their fields for the harvests of this year. We pledge the committee that the turn of the industrial tide back toward normal will begin the revival of which the imposition of the suggested schedules will assuredly induce.

We further put on record our intention to organize the entire South around an American tariff policy to equalize cost of production and maintain American standards of living, on economic grounds, irrespective of party. Our efforts will be educational

along these lines, but the surest proof of the wisdom and enduring soundness of the policy we advocate will be found, we are confident, in the immediate and lasting effects the operation of that policy will produce. The South asks only for equal treatment. Given that, she does not fear competition.

Respectfully submitted,

SOUTHERN TARIFF ASSOCIATION,

JOHN H. KIRBY, President.

Texas Farmers' League—N. A. Shaw, president.

Crude Cottonseed Oil Tariff Committee—Henry E. Watkins, chairman.

American Egyptian Cotton Growers' Association.

Florida Citrus Exchange—C. E. Stewart, business manager.

American Honey Producers' League—E. G. Lo Stourgeon, president.

West Virginia Beekeepers' Association—T. K. Massie, president.

Panhandle Beekeepers' Association—Will C. Griffith, president.

Colorado Honey Producers' Association—Frank Rauchfuss, manager.

United Peanut Association of America—P. D. Bain, president.

National Peanut Cleaners and Shellers' Association—Frank B. Bain, president.

Florida Potato Growers' Association—R. M. Burke, secretary-treasurer.

Potato Flour and Starch Tariff Committee—W. P. Hartman, chairman.

Rice Millers' Association—Frank A. Godchaux, president.

Southern Rice Growers' Association—W. B. Dunlap, president.

Louisiana Sugar and Rice Exchange—John G. Sheehan, secretary.

American Cane Growers' Association—Henry N. Pharr, president.

Georgia and Florida Tobacco Growers' Association—M. L. Floyd, president.

National Mohair Growers' Association—R. E. Taylor, president.

National Wool Growers' Association—F. J. Hugenbarth, president.

Sheep and Goat Raisers' Association of Texas—R. H. Martin, president.

New Mexico Wool Growers' Association—Praeger Miller, president.

Arizona Wool Growers' Association—Hugh E. Campbell, president.

American National Livestock Association—Ike T. Pryor, president.

Texas and Southwestern Cattle Raisers' Association—W. W. Turney, president.

New Mexico Cattle and Horse Growers' Association—G. E. Mitchell, president.

Arizona Cattle Growers' Association—Chas. P. Mullen, president.

Southern Cattlemen's Association—E. E. Lloyd, secretary.

National Dairy Products Association—J. J. Farrel, secretary.

Missouri Creamery Men's Improvement Association—L. M. Moore, secretary.

Southwestern Millers' League—L. E. Moses, president.

Texas Flour Milling Association—Frank Kell, chairman.

Wholesale Saddlery Association of America—Owen Gathright, chairman.

Southern Fertilizer Association—J. Russell Porter, president.

Fertilizer Mixers' Association of Georgia—T. J. Reeves, president.

Fish Oil Tariff Committee—Chas. M. Struve, chairman.

National Window Glass Manufacturers' Association—W. S. Phillips, president.

National Window Glass Workers—J. N. Neenan, president.

Tennessee Manufacturers' Association—J. E. Edgerton, president.

Georgia Manufacturers' Association—W. D. Baker, president.

Alabama Manufacturers' Association—L. Sovier, president.

Alabama Graphite Producers' Association—Geo. A. Sharpe, president.

Allied Asbestos Industries—C. J. Stover, secretary.

Barium Producers and Manufacturers of the United States—Maximilian Toch, president.

Portland Cement Association Tariff Committee—B. T. Scott, chairman.

Association of American Clay Producers—M. A. Edgar, vice-president.

Barytes Tariff Committee—W. S. Peebles, Cartersville, Ga.

Bauxite Tariff Committee—W. Rust Oppenheim, chairman.

Ferro Alloys Tariff Committee—Paul John Kruesi, chairman.

Crude Gypsum Tariff Committee—Frank W. Wilder and E. G. West, National Association of Marble Dealers—J. S. Sewell, president.

Tennessee Marble Exchange—W. E. Moses, secretary.

Mica Producers and Manufacturers' Tariff Committee.

United States Potash Producers' Association—F. W. Brown, executive secretary.

United States Manganese Corporation—Walter H. Denison, president.

Talc and Soapstone Producers' Association Tariff Committee—W. C. Bowser, chairman.

Turpentine and Rosin Producers' Association—C. P. Speh, secretary.

Georgia-Florida Sawmill Association—E. O. Herrell, secretary.

American Hardwood Manufacturers' Association—John M. Pritchard, secretary and manager.

American Mining Congress—Herbert Wilson Smith.

Farmers Extending Organization.

Chicago, April 18—[Special.]—Following the formation of the Farmers' Grain Marketing Corporation in this city last week, the American Farm Bureau Federation outlined plans for the formation of a National Fruit Marketing organization along similar lines, and a committee of 21 to report on the proposed organizing was authorized and is in the process of formation. The Farmers' Livestock Marketing Committee held its second session. Recommendations for the formation of the National Tobacco Marketing Committee are being received.

The National Cotton Marketing Conference will be held in Memphis, Tenn., on April 26, and the National Dairy Marketing Conference will be held in Chicago, beginning May 3.

**Over \$40,000,000 in Southern Construction Activities for Week
Ended April 22—A New High Record Established.**

Construction activities throughout the South actually under way and those for which initial announcements were made, as summarized for the week ended April 22 from items published in the construction columns of the MANUFACTURERS RECORD, involve the total expenditure of more than \$40,000,000, the largest amount recorded since the compilation was started several months ago. This gives a clear indication of the steadily increasing volume of construction work in the South, and forecasts accelerated activity in all lines as summer approaches. Of the total, \$8,286,454 represents contracts awarded for construction work of all kinds during the week, while \$32,066,950 is involved in projects for which announcements were made concerning contracts to be awarded in the near future preparatory to getting the construction work actually under way. Contracts awarded for the preceding week necessitated a total expenditure of \$6,745,127, and contracts to be awarded involved a total of \$22,001,923.

The most decided gains in the various classifications of structures and projects was in miscellaneous enterprises. For the week just closed, the contracts awarded amounted to \$1,256,000, and those to be awarded to \$12,169,700. The contracts awarded included two hospitals, costing \$60,000 and \$250,000, an irrigation system to cost \$500,000, near Pecos and Barstow, Tex.; a theater at Charleston, W. Va., costing \$200,000; in addition to smaller projects costing from \$12,000 and up. The contracts to be awarded involved the expenditure of from \$10,000 to \$2,500,000 each for 50 separate projects scattered through 13 States. Plans were announced for a motion-picture center to be established near Tampa, Fla., involving a total expenditure of \$2,500,000, as were plans for a hospital at St. Louis, costing \$1,000,000, and contemplated ~~and~~ improvements in Kentucky, costing \$1,000,000. Telephone improvements near Houston, Tex., will necessitate the expenditure of approximately \$890,000, while the construction of dikes near Kansas City, Mo., will mean an investment of \$960,000. Oil refineries, store houses, garages, theaters, flour mills, warehouses, foundries, lumber plants, electric light plants, land developments and cotton compresses and varied miscellaneous developments go to make up the big total.

Roads, paving and bridge projects continue to hold a high level, the figures for the week being \$2,533,639 for contracts awarded, and \$8,599,750 for contracts to be awarded. The construction of sewers, drainage and water-works is also progressing at good rate in the various communities.

The construction of school buildings is being pushed rapidly forward. During the week the contracts awarded for this class of structures involve the expenditure of \$756,615, while the contracts to be awarded have a total estimated valuation of \$3,148,000.

In keeping with the increased activity reported from many cities of the South in the construction of dwellings, a number of apartment-houses and hotels are already under construction, contracts are being awarded for additional structures, and many plans are in course of preparation. Contracts actually awarded involve the expenditure of \$2,213,000, and contracts to be awarded total \$2,213,500. Structures costing from \$10,000 to \$2,000,000 each are included in the totals, the principal projects to be carried out in Cumberland, Md., and Orlando, Fla., at a cost of \$1,500,000 and \$2,000,000, respectively, according to preliminary announcements.

SUMMARY FOR THE WEEK

	Contracts to be awarded.	Contracts awarded.
Dwellings	\$419,500	\$353,200
Apartment-houses and hotels.....	2,213,500	2,213,000
Bank and office buildings.....	1,470,000	200,000
Church buildings.....	920,000	510,000
School buildings.....	3,148,000	756,615
Store buildings.....	167,000	214,010
Association and fraternal.....	1,055,000	100,000
Roads, paving and bridges.....	8,599,750	2,523,620
City and county projects.....	1,142,500	175,000
Sewers, drainage and water-works.....	762,000	
Miscellaneous enterprises.....	12,169,700	1,256,000
	\$22,066,950	\$8,786,454

GONZALO ALMIRAL AND REBECCA

CONTRACTS AWARDED.				
Dwellings—		Mobile, Ala.		29,000
Baltimore, Md.	\$10,000	Golf Springs, Mo.		25,000
Baltimore, Md.	10,000	Winterhaven, Fla.		25,000
Roanoke, N. C.	10,000			
Norfolk, Va.	10,200			\$335,200

Apartment-houses and Hotel—		Association and Fraternal—	
Greenville, S. C.....	\$100,000	Greensboro, N. C.....	\$100,000
Greensboro, N. C.....	80,000	Roads, Paving and Bridges—	
St. Petersburg, Fla.....	32,000	Okla., Okla.....	\$120,000
Orlando, Fla.....	2,000,000	Huntington, W. Va.....	35,127
	\$2,213,000	Dallas, Tex.....	16,227
Bank and Office—		Fort Pierce, Fla.....	29,000
Washington, D. C.....	\$150,000	Wagoner, Okla.....	26,192
Danville, Va.....	50,000	McKinney, Tex.....	150,000
	\$200,000	Plottsburg, Mo.....	25,500
Church Buildings—		Sylvania, Ga.....	37,000
Tuscaloosa, Ala.....	\$125,000	Pascagoula, Miss.....	45,000
Kansas City, Mo.....	40,000	Kansas City, Mo.....	35,000
Memphis, Tenn.....	160,000	Jackson, Ky.....	40,225
Baltimore, Md.....	25,000	Walhalla, S. C.....	76,500
Memphis, Tenn.....	100,000	Memphis, Tenn.....	265,200
Baltimore, Md.....	29,000	Rusk, Tex.....	200,000
Baltimore, Md.....	100,000	Danville, Va.....	65,000
		Wagoner, Okla.....	65,000
		Paris, Tex.....	65,000
		Martinsburg, W. Va.....	184,000
		Canadian, Okla.....	50,000

§510,000 \$2,726,200

School Buildings—	City and County—	
Winser, La.....	Beaumont, Miss.....	\$175,000
Lemessa, Tex.....	Miscellaneous Enterprises—	
Welsh, W. Va.....	Richmond, Va., packing	
Columbia, Miss.....	plant.....	\$27,000
Boonville, Mo.....	Greenville, S. C., textile	
Pensacola, Fla.....	mill.....	20,000
Mooringsport, La.....	Richmond, Va., Masonic	
Bristol, Va.....	hall.....	\$5,000
Morrow, La.....	Catoctinville, Md., hospital	
Fayetteburg, Miss.....	total.....	60,000
Newburg, W. Va.....	Portsmouth, Va., stable	
	Springfield, Mo., theater	40,000
	Total.....	527,000

Store Buildings—	\$56,515	Charlotte, N. C., ware- house	37,00
Fort Worth, Tex.	\$20,000	San Antonio, Tex., hospi- tal	25,00
Tampa, Fla.	100,000	Corbin, Ky., theater	45,00
Atlanta, Ga.	25,000	Barstow, Tex., irrigation system	50,00
Greenville, S. C.	12,000	Charleston, W. Va., thea- ter	20,00
Waco, Tex.	12,000		
Birmingham, Ala.	35,000		

\$204,000 **\$1,256,000**

CONTRACTS TO BE AWARDED

Dwellings—		Raleigh, N. C.	600,000
Orlando, Fla.	\$40,000	Cowards, S. C.	32,000
Danville, Va.	24,000	Columbia, Tenn.	35,000
Adrian, Ga.	8,000	Tampa, Fla.	65,000
Richmond, Va.	16,000	Elsherry, Mo.	45,000
Norfolk, Va.	10,000	Four Oaks, N. C.	75,000
Norfolk, Va.	15,000	Greensboro, Md.	60,000
Bluefield, W. Va.	40,000	Brevard, N. C.	15,000
Seabreeze, Fla.	150,000	Hartlingen, Tex.	31,000
San Antonio, Tex.	25,000	Calhoun, Va.	16,000
Clarksburg, W. Va.	11,500	Barrackville, W. Va.	100,000
Baltimore, Md.	22,000	Bradenton, Fla.	12,000
Baltimore, Md.	10,000	Tampa, Fla.	12,000
Baltimore, Md.	18,000	Vero, Fla.	30,000
Millersville, Md.	15,000	Delta, Mo.	12,000
Columbia, S. C.	15,000	Willard, Mo.	30,000

	\$419,500
Apartment-houses and Hotels—	
Huntington, W. Va.	\$20,000
Miami, Fla.	15,000
Fairmont, W. Va.	\$5,000
Cumberland, Md.	1,500,000
St. Petersburg, Fla.	60,000
St. Petersburg, Fla.	50,000
El Paso, Tex.	10,000
Houston, Tex.	16,000
Mexia, Tex.	250,000
Little Rock, Ark.	17,500
Richmond, Va.	90,000
Rayville, La.	120,000
Eufaula, Okla.	65,000
San Antonio, Tex.	500,000
Chaplin, Ky.	15,000
Mayfield, Ky.	65,000
Richard City, Tenn.	55,000
South Pittsburg, Tenn.	75,000
Brownsville, Tex.	175,000
Palestine, Tex.	100,000
	33,148,000
Store Building—	
Enid, Okla.	\$25,000
Moore, Okla.	10,000
	\$35,000

Bank and Office Buildings—	321,300
St. Matthews, Ky.	820,000
New Orleans, La.	250,000
Washington, D. C.	300,000
Atlanta, Ga.	750,000
	50,000
	35,000
Asheville, N. C.	40,000
Louisville, Ky.	20,000
Richmond, Va.	12,000
Richmond, Va.	14,000
Keystone, W. Va.	20,000

ATLANTA, Ga.....	150,000	\$167,60
	\$1,470,000	Association and Fraternal—
Church Buildings—		
BIRMINGHAM, Ala.....	\$100,000	Raleigh, N. C.....
Louisville, Ky.....	50,000	Leniwick, Ky.....
		Raleigh, N. C.....

Louisville, Ky.	50,000	Oklahoma City, Okla.	400,000
Norman, Okla.	150,000		
Fairmont, W. Va.	100,000		
Shreveport, La.	15,000		\$1,055,000

St. Louis, Mo.	100,000	Rounds, Paving and Bridges—
Dallas, Tex.	150,000	Russell, Ky.
Huntington, W. Va.	80,000	McAlester, Okla.
Louisville, Ky.	100,000	Grant City, Mo.
Altus, Okla.	75,000	Dallas, Tex.
		Poplar Bluff, Mo.
		Poplar Bluff, Mo.
School Buildings—	\$920,000	Cushing, Okla.
Pell City, Ala.	\$10,000	Stillwater, Okla.
Brooksville, Ky.	40,000	Brenham, Tex.

Liberty, Mo.	20,000
Charleston, Miss.	200,000
Vicksburg, Miss.	50,000
Liberty, Mo.	25,000
Mebane, N. C.	155,000
Sanford, N. C.	200,000
Abilene, Tex.	150,000
Wichita Falls, Tex.	75,000
Livingston, Ala.	200,000
Clayton, Mo.	62,000
Bamberg, S. C.	50,000
Rockhill, S. C.	100,000
Anahuac, Tex.	60,000
La Grange, Tex.	100,000
Abbeville, Ga.	100,000
Winston-Salem, N. C.	210,000
Byardstown, Tenn.	50,000
Albany, Mo.	114,000
Charlotte, N. C.	2,000,000
	\$8,599,739

City and County Projects—	
Lees Summit, Mo.	\$10,000
Chattanooga, Tenn.	600,000
Jackson, Miss.	300,000
Greenville, S. C.	12,500
Baltimore, Md.	130,000
	\$1,142,500

Sewers, Drainage and Water-works—	
Bennettsville, S. C.	\$50,000
Bronte, Tex.	20,000
Chesterfield, S. C.	75,000
Dallas, Tex.	450,000
Higginsville, Mo.	12,000
Martin, Tenn.	100,000
Babbinger, Tex.	10,000
Babbinger, Ga.	45,000
	\$762,000

Miscellaneous Enterprises—	
Richmond, Va., packing plant	\$27,000
Covington, Ga., cotton compress	80,000
San Angelo, Tex., power plant	70,000
St. Albans, W. Va., bolt and forge plant	100,000
Eldorado, Ark., oil refinery	80,000
Kansas City, Mo., dikes	960,000
Atlanta, Ga., chemical plant	1,000,000
Danville, Va., creamery	50,000
Dallas, Tex., service station	10,000
Dallas, Tex., garage	11,500
Houston, Tex., telephone improvements	890,270
Babbinger, Tex., electric plant	75,000
Louisville, Ky., oil refinery	500,000
	\$12,161,700

BIG ADVANCE SHOWN IN ROAD BUILDING AND STREET PAVING.

Asphalt Association Adopts Strong Resolutions Leading Toward Elimination of Waste in Highway Construction and Placing Industry on Higher Plane.

New York, April 21—[Special.]—The second annual convention of The Asphalt Association, held at the association headquarters in this city, April 13, marked important general advances in the road-building and street-paving field. The association, which is the national organization of asphalt producers, machinery manufacturers and contractors, took the lead in advocating measures which, if adopted, will go far toward placing the road-building and street-paving industry on a higher plane and a sounder footing, and will not only create more wholesome competition, but eliminate waste and extravagance in highway construction.

The annual address of the president, Joseph R. Draney, of the United States Asphalt Refining Co., New York, developed the need of many men for work during the highway construction period now opening. Mr. Draney reported that the asphalt industry, on the whole, and despite present conditions, is in a sound condition with prospects for the production of enough oil to assure an adequate supply of asphalt for years to come.

President Draney predicted that, unless reactionary pessimism grips the nation, 700,000 men will be needed in the building of the 35,000 miles of new highways contemplated this year under the billion-dollar road program outlined by the Federal Government and the States and counties. Three hundred thousand more men, he said, will be needed in the quarries, gravel-pits, cement, brick and asphalt plants and factories devoted to the manufacture of road machinery. The road-building boom, he thought, will

Ahoskie, N. C., electric-light plant	40,000
Highland Park, Tex., lighting system	16,600
Beaumont, Tex., land development	100,000
Lewisburg, Tenn., milk-condensing plant	500,000
Greensboro, N. C., garage	60,000
Dunngannon, Va., garage	10,000
St. Louis, Mo., hospital	1,000,000
Miami, Fla., hospital	35,000
Dallas, Tex., warehouse	26,000
Dallas, Tex., lumber shed	10,500
Wellston, Mo., theater	65,000
Kansas City, Mo., post office	126,000
Cape Girardeau, Mo., moving-picture parlor	75,000
Warrensburg, Mo., dairy	30,000
Raleigh, N. C., grandstand	30,000
Houston, Tex., storehouse	90,000
Houston, Tex., paint shop	110,000
Chevies, Ky., coal development	1,000,000
Bibb City, Ga., electric-light plant	30,000
Ballinger, Tex., electric-light plant	65,000
Huntington, W. Va., packing plant	100,000
Baltimore, Md., metal factory	70,000
Louisville, Ky., marble plant	60,000
Kansas City, Mo., clubhouse	10,000
York, S. C., orphanage	20,000
Charleston, W. Va., theater	75,000
Opelika, Ala., flour mill	15,000
Tampa, Fla., motion-picture center	2,500,000
St. Petersburg, Fla., garage	25,000
Nashville, Tenn., garage	15,000
Pauls Valley, Okla., theater	15,000
Fairmont, W. Va., theater	15,000
St. Petersburg, Fla., warehouse	18,000
Waco, Tex., warehouse	100,000
Birmingham, Ala., foundry	20,000
Crystal Beach, Fla., land development	1,000,000
Corpus Christi, Tex., breakwater	100,000
Oklahoma City, Okla., planing mill	20,000
	\$12,161,700

work great benefit to the railroads by bringing into service 100,000 idle freight cars to transport 100,000,000 tons of road materials.

"To set a great army of 1,000,000 men, now for the most part unemployed," said President Draney, "at building highways is to solve in part not only the acute unemployment problem facing the nation, but also part of the rail troubles. Furthermore, money in plentiful quantities would be released for local circulation through wages to local labor and in payments to local producers of stone, gravel, sand and other materials, thus easing the pressure brought about by the reductions in the price and demand for agricultural products. Stimulation in the production of trucks, machinery and raw materials and in engineering and the employment of labor can positively be accomplished with an untrammeled road-building program. At the same time we would be reducing the dangers to travel by abolishing railroad grade crossings, more adequately bridging rivers and smaller streams, putting the outlying districts closer to medical and hospital aid, and would bring the farmer and his market in closer touch."

Taking the stand that efficient engineering and executive management are essential to the improvement of the nation's highway; that highway expenditure should be proportioned to traffic importance; that advantage should be taken of every opportunity to benefit by the road-building experience of other nations; that the unemployed of the nation should receive employment as quickly and extensively as possible, and that a vigorous public works program will offset industrial depression, the association adopted resolutions as follows:

1. Urging Congress to pass the Federal-aid appropriation of \$100,000,000, thus assuring a continuance of road-building under the supervision of skilled State and Federal engineers.

2. Urging that highway management be divorced from politics and all materials and methods entering into highway construction be placed in open competition.

3. Declaring that every highway be required to show traffic justification for its construction, thus guarding against waste and extravagance.

4. Memorializing Congress to authorize the United States to join the Permanent International Association of Road Congresses made up of the highway departments of all nations.

5. Urging the Interstate Commerce Commission to authorize a reduction in freight rates for road materials, thus stimulating the road-building program.

6. Recommending that public officials carry forward road-building programs to the extent permitted by appropriations available, thus giving employment to many hundred thousand men now out of work and utilizing tens of thousands of idle open-top freight cars.

A new board of directors was elected to consist of the following men: Henry Fisher, Standard Oil Co. of New York; Herbert Spencer, Standard Oil Co. of New Jersey; J. R. Draney, U. S. Asphalt Refining Co.; F. A. Hogan, Imperial Oil, Ltd.; J. S. Helm, Standard Oil Co. of Louisiana; E. J. Morrison, Hastings Pavement Co.; F. P. Allen, Standard Oil Co. of Indiana; L. M. Law, New Orleans Refining Co.; H. B. Pullar, Pioneer Asphalt Co.; G. H. Perkins, Warren Brothers Co.; W. T. Headley, Headley Good Roads Co.; J. E. Clark, Standard Oil Co. of Kentucky; Richard Pebworth, Cressy Road Sprayer Mfg. Co.; B. F. Richardson, Union Paving Co. of Chicago.

The directors elected F. P. Allen of the Standard Oil Co. of Indiana, Chicago, Ill., as vice-president, to succeed J. M. Woodruff of the Sinclair Refining Co., Chicago, and re-elected J. E. Pennybacker, secretary.

Award Contract for \$250,000 Hospital.

San Antonio, Tex., April 21—[Special.]—In addition to the construction of a group of buildings for a college and high school, costing \$400,000, the Sisters of Charity of the Incarnate Word have awarded the contract for the construction of a five-story fire-proof hospital, which, when completed, will cost \$250,000 without equipment. The building will have a roof of slag and gravel, and floors of tile, composition and cement, and heated by steam. Two elevators will be installed. Plans for the hospital were prepared by Atlee B. Ayres, 626 Bedell Building. The general contractor is the J. C. Dielman Construction Co. The hospital is to be known as the Santa Rosa Infirmary.

Crop Diversification in the South

FIGURES SHOW THAT SOUTH IS NOT A ONE-CROP SECTION, AND NEVER HAS BEEN—STEADY IMPROVEMENT NOTED—LESS TENDENCY NOW THAN EVER TO CONCENTRATE ON COTTON ONLY.

By F. W. GIST, Agricultural Statistician, Montgomery, Ala.

Technically speaking, there is no section of this country, bounded by State lines, where farming is conducted along scientifically diversified lines. To put it in other words, no State has its crop acreage so distributed that the percentage of each to the whole would not look somewhat ragged if charted in a ratio curve. The acreage devoted to hay in the New England States approaches very close to, and in some exceeds, half the total; in the Middle West corn occupies in many States more than half, and in all a very heavy proportion, of the entire area; in some far Western States wheat constitutes a top-heavy portion of the cultivated area. In every case, whatever the degree to which one-crop farming has approached, there is some practical reason therefor. Soil or climatic adaptability, market conditions, financial and credit facilities and labor supply have, either or all, furnished the underlying cause for the acreage distribution which is practiced. They have all combined in most sections to prevent the system of crop rotation, which is the principal and most valuable reason for and result of scientific diversification, and have in many sections in all parts of the country resulted in pulling down the fertility which the farmer found in his soil at the beginning of his efforts. In some cases careful study and practice has brought nearly the proper remedy; in others the depletion of soil and pocketbook is still going on.

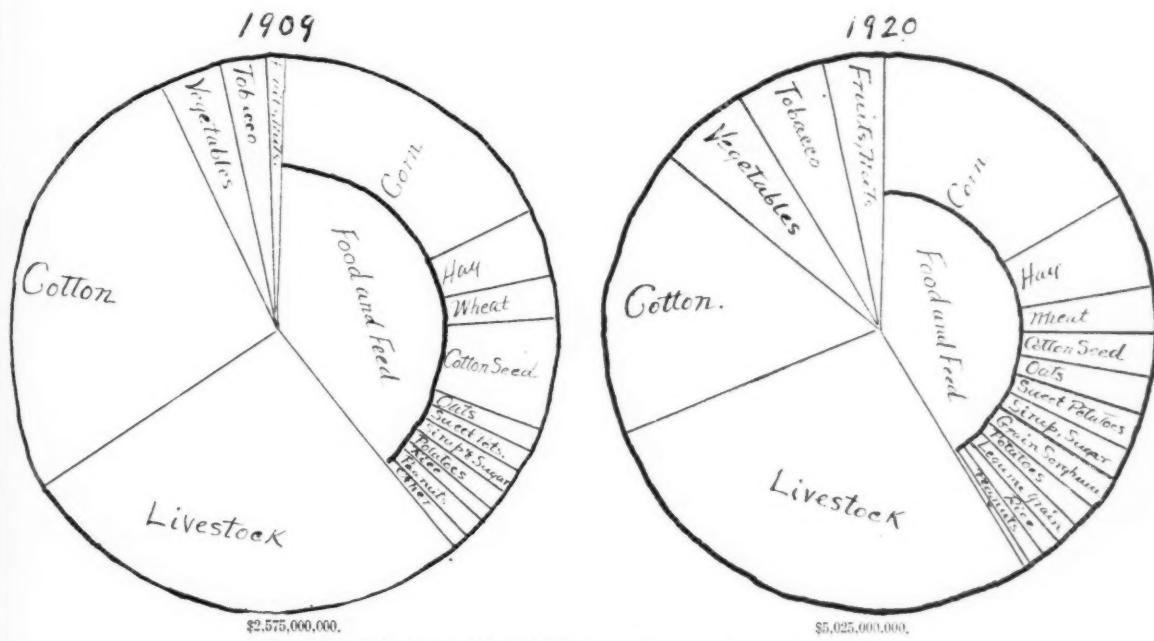
The South is no exception to the general rule in American agricultural practice; neither has it gone any further toward a strictly one-crop system than its neighbors north, east and west. It has long been charged with being a one-crop section. The charge, measured by value of products or distribution of acreage, has never been true; at present it is much less nearly so than in the past. All the factors mentioned above combined, since 1865, to

encourage the production of cotton in the South as the chief money crop, and it is known of all men that the South has produced too much cotton for its own good. Even since 1914, when its largest crop brought its least profitable returns, it has piled up a surplus above the world's consumption, which at present equals a fair-sized annual production. And yet neither before nor since 1914 has cotton either occupied nearly half of the South's farm acreage or approached one-half its crop value.

Various agricultural authorities, some official and some private, have been interminably calling upon the South to diversify its crops. For a long time, and still, the word "diversification" has been a sweet morsel of language to be rolled under the tongue of every prophet and son of a prophet who had a remedy for the existing ills to which the Southern farmer was subject. Some of these eminent specialists have sought only the profit of the farmer, but were unfortunate, not so much in the diagnosis of the complaint as in naming the disease. Others, self-constituted physicians in waiting, have grabbed "diversification" as a pleasant-sounding remedy and used it mainly as an advertisement for their goods. An examination of the records and careful study of the facts will clear up in our minds some of the mistakes in diagnosis and prognosis which have begun to confuse the farmer, especially those of the latter who have already diversified without the glorious results which have been heralded from the housetops round about.

Distribution of Southern Crop Value.

The following statement shows, for 1920 and 1909, the percentage which each commodity contributed to the total value of farm production in the Southern States, not including Delaware, Maryland and the District of Columbia. The figures from which the percentages for 1920 were calculated are the estimates of the Bureau of Crop Estimates for the field crops, to which have been added the best available information regarding livestock products.

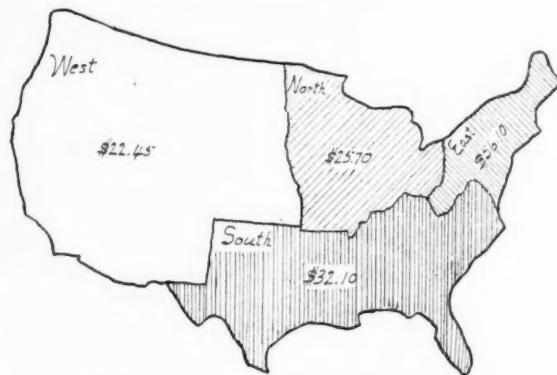


vegetables and fruits and nuts. Those for 1909 are from the census of 1910:

Product.	Per cent of total value, ~	
	1920.	1909.
Food and feed crops:		
Corn	16.7	17.5
Hay	5.5	4.9
Wheat	3.2	2.4
Cottonseed	2.5	6.5
Oats	2.2	1.5
Sweet potatoes	2.2	1.4
Syrup and sugar	2.0	1.7
Grain sorghum	1.9	4
Potatoes	1.5	1.1
Leguminous grains	1.2	4
Rice	1.0	.8
Peanuts	1.0	.7
Other minor	.3	.2
Total food and feed	41.2	38.8
Livestock products	28.0	26.0
Cotton	17.3	26.0
Vegetables	5.4	3.6
Tobacco	4.9	3.4
Fruits and nuts	3.2	2.2

This does not take any account of the large area devoted to crops which were grazed or hogged off, and which in 1920 had developed to very valuable volume in many of the 13 States included in this study.

Of course, unit prices enter largely into the percentages shown in both columns. If the 1920 cotton crop had brought the money return which its unit price at planting time gave promise, the per-



AVERAGE ACRE VALUE OF ALL CROPS, 1920.

centage accredited to cotton value would be different; and yet the unit price of corn, peanuts, hogs—in fact, most of the commodities—went the same way, and, after all, the figures indicate fairly well for the two years the distribution of crop values in the South.

Distribution of Southern Crop Acreage.

Doubtless the intention of the farmer in his effort to diversify will be more readily determined from the acreage which he devotes to the various crops. The statement below shows the percentage which the acreage to each crop named bore to the total acreage devoted to the 12 principal field crops. This statement does not include any acreage except that gathered, and does not include the velvet bean, soy bean, grain sorghum and some other minor crops of importance, for the reason that comparisons for the two years are not practicable. The crops named constitute above 90 per cent of the crop acreage, and in some cases exceed the actual cultivated acreage, on account of the interplanted acreage occupied by some of the crops.

Crop.	Per cent total acres, ~	
	1909.	1920.
Corn	40.9	37.8
Wheat	4.7	6.6
Oats	3.8	5.6
Hay	8.5	10.9
Rice	.7	1.0
Peanuts	1.0	1.2
Peas	1.1	1.6
Potatoes	.4	.5
Sweet potatoes	.6	.9
Sugar crops	.9	.8
Total food and feed	62.6	66.9
Cotton	36.2	32.5
Tobacco	1.2	1.5

Neither in value of products nor acreage is diversification in these States shown to be developed to its highest possible average point, but for both years all the figures, as well as the charts, dis-

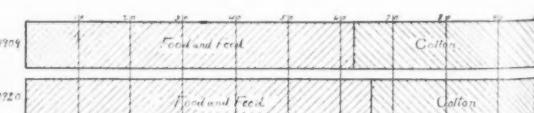
close a fair approach to practical diversification which will compare favorably with any section of the country. It is also seen that the proportionate acreage which both corn and cotton occupy has decreased since 1909, while in every other case the proportion has risen. This despite the fact that the actual acreage devoted to each crop in the South as a whole is greater now than then.

Diversification Shown by Sales.

Farmers produce for two purposes—home consumption and sale. The highest point of efficiency to which diversification could be developed would be that where each farmer produced everything which he consumes, limited only by the capacity of his soil and the climatic conditions of his section, and such surplus of each commodity as would be profitably absorbed by such markets as are available. Few, if any, sections have gone this far on the road, and few individual farmers even have reached this ideal point. The sales of surplus commodities furnish an index to the standing of sections in this respect, the presumption being reasonable that only surpluses not needed will be sold. This presumption is not absolute, even for those commodities which may be consumed without manufacture, but for most items sales will indicate in a reasonable degree the point which production has reached as related to home consumption. These columns some time since contained an estimate of the production and sales of farm commodities in the Southern States from the crop of 1919. The following statement shows the same estimated data from the crop of 1920, the figures being arrived at by the same methods:

Crop.	Value of products, ~	Per cent sold, ~	Value of sales, ~
Corn	\$827,297,000	10	\$121,985,000
Cotton	868,502,000	100	868,502,000
Cottonseed	128,133,000	81	104,167,000
Oats	111,416,000	19	21,449,000
Wheat	160,280,000	64	102,413,000
Barley	3,218,000	25	825,000
Buckwheat	896,000	22	193,000
Rye	6,405,000	9	582,000
Tobacco	245,699,000	68	210,362,000
Broom corn	2,654,000	90	2,388,000
Clover seed	900,000	29	264,000
Hay	276,865,000	21	55,968,000
Peanuts	48,771,000	71	34,525,000
Potatoes	77,774,000	41	31,958,000
Sweet potatoes	111,350,000	24	22,675,000
Sorghum syrup	34,325,000	22	7,456,000
Sugar cane	67,555,000	41	30,650,000
Grain sorghum	98,058,000	25	24,315,000
Rice	52,043,000	93	48,497,000
Velvet beans	19,914,000	24	4,797,000
Cowpeas	34,832,000	32	12,078,000
Soy beans	8,057,000	18	1,518,000
Fruits	160,500,000	44	71,525,000
Vegetables	267,000,000	28	75,350,000
Livestock and products	1,401,927,000	50	705,115,000
Total	\$5,024,604,000	52	\$2,610,127,000

The percentage of all surpluses sold or to be sold from the 1920 crop total slightly less than from 1919, due to the severe drop in the price of articles which are practically all sold, such as cotton, rice, tobacco and peanuts but for these crops and commodities, which are usable at home, the 1920 surpluses average some higher than for 1919, due to the greater volume of production. The point to be emphasized in relation to diversification is that each commodity produced on Southern farms furnished some measure



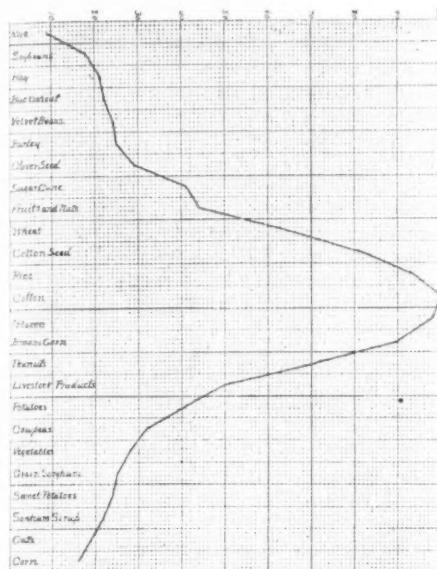
DIVISION OF ACREAGE TO 12 PRINCIPAL CROPS, 13 SOUTHERN STATES, 1909 AND 1920.

of surplus for sale, ranging from 9 per cent for rye to 100 per cent for cotton. Livestock products furnish a splendid example, both in their total value and the percentage sold. The aggregate value is seen to be 50 per cent greater than that of the cotton crop, while the surplus sold, only 50 per cent of the total, is but 20 per cent less than the sale value of cotton, the latter being coextensive with the aggregate. While these sales include interfarm exchanges in some commodities and disposition of others beyond the safety point in home consumption, taken as a whole they add to the proof that the South has diversified its farming operations to the point where it is not dependent, either for consumption or sales, upon any one or two commodities. It is notable from the

last statement that the so-called money crop of the South last year brought only about one-third of its farm cash income, while six commodities furnished from \$100,000,000 to nearly \$900,000,000.

The Profits of Diversification.

Individuals here and there have diversified without any showing of profit, due to unwise methods, unfavorable markets, inefficient or expensive transportation, insufficient credit for orderly disposition or some other practical reason. On the whole, however, the South can easily show results for its efforts and accomplishments toward diversified farming. The outline map presented herewith



PERCENTAGE OF FARM PRODUCTS FOR SALE FROM CROP OF 1920.

divides the United States into four general sections, and shows the average acre value of the crops produced in 1920 for each. The averages are calculated from the statement of the Bureau of Crop Estimates giving the theoretic acreage and value of crops for the States within each group, which does not include livestock products. The East, of course, shows the result of highly specialized production in high-priced commodities. The North would probably make a better showing if livestock products were in-

cluded. The West, notwithstanding it includes the high-producing fruit and truck States of California and others, is much more closely wedded to one-crop farming than even the South. The averages given speak volumes for the real practical sectional and individual success of Southern agriculture. In addition to this general proof of the profits of diversification, multiplied instances may be found in all the Southern States to emphasize its importance. In Alabama for three years past, during which cotton has run the gamut from 42 to 12 cents a pound, certain sections devoting the least proportion of their acreage to cotton have received the highest return per unit of farm operation in the season of highest-priced cotton as well as the lowest. In this State last year the value of the milk produced was greater than that of the cotton crop, and while only 38 per cent of her livestock was sold, the sale value was within a fraction of the total and sale value of cotton.

The Real Problems.

The real problem of Southern farms is not diversification per se. As already said, the word has been and is still being overworked in connection with the complaints of the Southern farmer. Here and there may still be found many individuals who are rallying too long around the flag of the dethroned king; whole sections are devoting too much of their soil and labor to the production of an unprofitable crop; four whole States among the 13 still had last year more than 40 per cent of their principal acreage in cotton, and another had more than 35 per cent. Arkansas, Georgia, Mississippi, South Carolina and Texas may, judged by the facts, still profitably study the subject of diversification in the abstract, and that part of Tennessee which grows cotton might be included. The rest of the South, beyond individual sections and farms, have troubles which should be called by their proper names—problems which require both general and personal solution. This would make another story.

Briefly, the South has three universal problems—the growing of greater acre yield, that production may be more economically accomplished; the application of more businesslike methods of purchase and sale; the finding of a safe farming system and sticking to it to prevent loss from varying prices in specific commodities during normal times. All the rest are mere minor complaints requiring individual treatment.

Work Begun on \$500,000 Sand Lake Reservoir and Irrigation Project in Texas.

Pecos, Tex., April 21—[Special.]—Work has begun on the \$500,000 Sand Lake Reservoir project, located about 15 miles northwest of this place, according to information received from the Barstow irrigation district, under whose direction the work will be conducted. Sand Lake is a large basin, practically landlocked, covering an area of about eight square miles, and will permit the construction of a dam that will hold water to a depth of about 35 feet, which supply it is estimated will flood about 80,000 acres of land to a depth of about one foot. This supply of water will permit the irrigation of approximately 30,000 additional acres of land in the valley, thereby practically doubling the present cultivated area in that section.

The necessary surveys and preliminary engineering work on this reservoir have been completed for some time, but were held up on account of the war, and the local committee now in charge plan to carry the work forward after these plans. The committee in charge of the work is as follows: Dr. James Camp, D. W. Bozeman and T. B. Pruitt of Pecos; R. B. Thurston and W. L. Burkholder of Barstow.

\$200,000 Store and Theater Building for Charleston.

Charleston, W. Va., April 22—[Special.]—The Mills and Millsbaugh Co. of Columbus, O. are architects and contractors for a store and theater building to be erected here at a cost of over \$200,000, by the Kanawha Investment Co. of this city. The structure will be of fireproof construction, and 93x200 feet, containing store space and room for a large theater. The floors are to be of cement and maple, and the roof of composition.

Florida has a number of well-established vineyards, and the grape growers of the State are planning to develop the industry further and put it on a firmer basis by organizing a marketing association.

RATIO COTTON TO ACREAGE OF 12 PRINCIPAL CROPS, STATES INDICATED, 1909 AND 1920.

Facts Showing the Necessity of Protecting the Cattle and Sheep Industry of America

In a recent address before the Forty-fifth Annual Convention of the Cattle Raisers' Association of Texas, I. T. Pryor of San Antonio, speaking of the vital necessity of protecting the cattle-raising industry of the United States, gave some facts and figures worthy of serious study. He said, in part:

"We talk about a tariff of at least sufficient amount to equalize the cost of production here and abroad. Who knows or can find out the exact cost of production? Take the cattle business, for example: It costs less to produce a beef in Texas than in Nebraska and less in Kansas than in Illinois. One year it can and does often cost 25 to 50 per cent more to care for an animal than the previous year or the year following, hence the cost of production will vary all over the United States, according to local conditions, etc.

"We should place a tariff sufficiently high on livestock and the products of livestock to cover the cost of production compared to that of foreign countries, plus a reasonable profit, and at the same time not so high as to create a monopoly. It is asking no favor to put us on an equal footing with foreign importers, and when we don't receive that consideration from Congress then the favor is extended the foreign producer of raw material, and not the home producer, which is absolutely unfair.

"To better understand the importance of protecting our livestock producers by a proper tariff the following statistics should be studied carefully:

POPULATION AND NUMBER OF CATTLE AND SHEEP.

	Population.	Cattle— Pre-war period.	Cattle— Recent estimates.	Increase.
Argentina	8,284,000	25,867,000	35,000,000	
Uruguay	1,379,000	8,193,000	7,802,000	
Brazil	26,542,000	30,705,000	37,500,000	
Australia	4,971,000	11,745,000	11,049,000	
Totals.....	41,176,000	76,510,000	91,342,000	19%
United States.....	106,653,000	61,804,000	67,866,000	9%
	Population.	Sheep and lambs— Pre-war period.	Sheep and lambs— After-war period.	Decrease.
Argentina	8,284,000	81,485,000	82,000,000	
Uruguay	1,379,000	26,286,000	11,473,000	
Brazil	26,542,000	10,653,000	7,000,000	
Australia	4,971,000	92,047,000	91,676,000	
Totals.....	41,176,000	210,471,000	193,149,000	8%
United States.....	106,653,000	52,448,000	49,863,000	4%

ANNUAL WOOL CLIP OF ENTIRE WORLD.

		Pounds.
United States.....	11 2/10%	314,000,000
Australia, New Zealand and contiguous.....	26 4/10%	740,000,000
South America.....	16 8/10%	470,000,000
Other countries.....	45 6/10%	1,276,000,000
Annual wool clip of entire world.....		2,800,000,000

"The four competitive countries first mentioned are known to consume less meat per capita than our people, and their population is less than 40 per cent of that of the United States, yet they raise nearly 40 per cent more beef and four times as much mutton as we do, and consequently export the bulk of their meat.

"Argentina has more than four cattle and ten head of sheep per capita, while we have but little more than half a beef per capita and less than half a mutton per capita. The great markets of this country are in large cities, most of which can be reached by water transportation; in other words, at least one-third of the American people today can be reached from foreign countries by water transportation, and when the great canal is built, which will connect the Lakes with the Atlantic Ocean, thus permitting ocean-going ships to reach Chicago, one-half of the American people can be fed by water transportation from foreign countries.

"From the Pan-American Union statistics it develops that farm laborers in Argentina receive from \$10 to \$20 per month and boarder. It should also be considered that these competitive countries still have enormous tracts of free range, and the cost of raising cattle is much less than here. Land values and pasture charges are much lower there than in this country, and there is

hardly an item of expense incident to the livestock business that is not very much less in competitive countries than here.

"Livestock receipts at market centers declined more than 10 per cent in 1920 as compared to 1919. On such a decline in receipts why didn't cattle, hogs and sheep increase in price? The answer is, imports of meats free of duty in various forms took up the slack and prevented the advance; on the contrary, pressed the market downward. Cattle led in the decline of agricultural products in 1919.

"Out of the \$4,000,000,000 estimated necessary to run this Government for one year, only 15 per cent of this vast sum is collected at the custom-houses on import duties; the balance, or 85 per cent, is from internal revenue. This is the result of the workings of the Underwood bill. Under the Payne-Aldrich bill 65 per cent of all the revenue necessary to run this Government was collected at the custom-houses on import taxes; balance of 35 per cent was collected from some internal source, a great deal of which was from whiskey and tobacco tax; however, it required only about \$1,000,000,000 those days to run the Government as against \$4,000,000,000 today.

During the 12 months ending June 30, 1920, there were imported free of duty..... 16,258,229 pounds of mutton and lambs, and during the succeeding four months the imports of mutton and lambs free of duty amounted to..... 64,623,777 pounds

Total..... 80,882,006 pounds

"During the last four months of this period there were practically four times as much of these imports as in previous 12 months.

"Putting the average mutton carcass at 40 pounds, it means there were the equivalent of more than 2,000,000 sheep brought into this country free of duty during said 16 months' period, and of this number three-fourths, or 1,600,000 head, arrived during the short period of four months.

"More than 100,000 carcasses of beef and veal were also imported into this country free of duty in the past 16 months, making a total of over 3000 carloads of cattle and about 10,000 carloads of mutton and lambs. This vast amount of meat was brought into this country in ships which entered our harbors without the expenditure of one single dollar in this country before it reached our large consuming centers. When sold, at least 95 per cent of the proceeds were returned to some foreign country—practically little or no benefit to our commerce in any way. This is the direct result of no duty.

"What if this 3000 cars of cattle and 10,000 cars of mutton and lambs had been marketed from our farms and ranches in this country? Our railroads would have received freight on 13,000 cars of cattle and sheep. The charges for switching and bedding the cars, feed, yardage, attendance, war tax, also a commission charge, would have been distributed among the various interests named, and finally, and most important, the net proceeds would have been deposited in our home banks or applied on some hard-bred cattle or sheep man's paper. This would be the result of a protective duty on imports."

Make Big Addition to Tank Storage Capacity.

Houston, Tex., April 25—[Special.]—An addition of 15 steel storage tanks, each of 55,000 barrels capacity, is to be made to the tank farm of the Humble Oil & Refining Co. at Dublin, Tex. The contract for the construction of these tanks has just been let. When completed they will give the company a total storage capacity of 2,750,000 barrels of oil at its Dublin tank farm. Several of the other larger oil companies are enlarging their storage facilities and during the next six months more than 5,000,000 barrels of additional tankage will have been built in Texas, according to present plans, it is stated.

HANDLING BALED COTTON.

Urgent Need For More Warehouse Facilities Can Be Met Partly By New Construction and Partly By Adopting Proper Mechanical Handling Methods.

By R. H. STONE, Lakewood Engineering Co.

Warehousing in conjunction with compressing and marketing raw cotton is receiving more attention than formerly. This is because of the urgent need for cotton growers, in self protection, to provide storage capacity so that cotton can be intelligently released to the market. Under the present circumstances, for example, when the price paid producers for cotton is less than the actual cost of production, bankruptcy would result to the producers if they were to sell their crop. There is only one recourse for those who can afford to hold the crop, and that is the warehouse.

This situation has brought about a startling warehouse shortage which will partly be met by new construction and the introduction of economical handling equipment. The economy of these new facilities will be manifested in decreased loss through deterioration, decreased insurance rates, and decreased cost of handling.

The average warehouse or compress storage presents a transportation problem which is very difficult and costly of solution where hand methods with two-wheel trucks are employed. The distances which the bales must be moved into storage or to and from the compresses and the warehouses are great—1000 feet is not too high an average figure. Furthermore, the distribution of the bales under the system of blocking according to mark requires a flexibility which cannot be achieved by such methods of material handling as narrow-gauge track and cars, or overhead monorails. This is the one great point in favor of hand truckers moving one bale at a time and dropping it exactly where desired.

These conditions, however, are not unlike those found in large manufacturing plants where this problem has long been satisfactorily solved by the use of four-wheel trucks of such design that they may be coupled together into a train and hauled by an electric storage-battery tractor. These trains can be routed and scheduled through the plant, and can reach any desired point with entire flexibility.

Several compress and cotton warehouse companies have been utilizing such a system for handling baled cotton, and are showing a substantial saving besides liberating men for more productive labor.

One of the latest organizations to install such equipment is the Shipsides Density Compress Co. of Galveston, Tex.

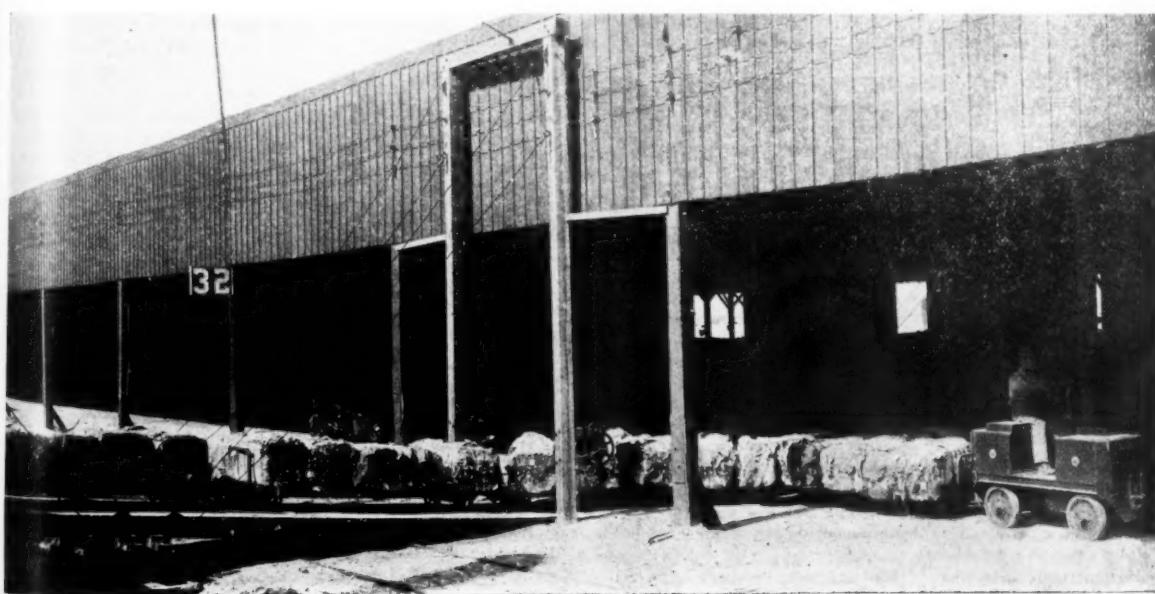
This company operates six high-density presses adjacent to the pier warehouses on the Galveston waterfront. Flat cotton from the gins and standard density bales are brought in by rail or truck and "blocked" in the warehouses. From this point it is moved to the compresses, pressed, re-marked and hauled to the warehouses and held for shipment. With the tractor and trailer system, four trailers are left at the standard density and flat-cotton blocks. These trailers are loaded with four bales and hauled to the presses where the tractor leaves them and picks up a train of four trailers each loaded with five high-density bales. This train is hauled



THIS METHOD REQUIRES 25 MEN AGAINST ONLY SEVEN FOR EACH PRESS BY THE TRACTOR AND TRAILER SYSTEM.

to the high-density storage alongside the piers and dropped, and the tractor coupled onto a string of four empty trailers which have meanwhile been unloaded and returns to the press. For the complete cycle in the service of one press, one tractor and sixteen trailers are required.

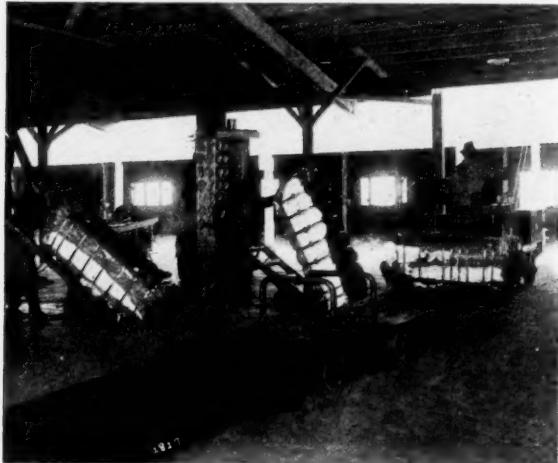
The savings effected by this equipment are quite remarkable. For example, one press requires the handling of 900 bales per 9-hour day, an average distance of 1200 feet. To do this with hand truckers would require about 25 men. The tractor and trailer system requires only seven men, including the tractor operator, a saving of approximately \$65 per day. At this rate,



TRAIN WITH HIGH-DENSITY BALES GOING FROM PRESSES TO PIERS, FOUR-WHEEL STEER TRAILERS PERMIT A 90° TURN.

the saving for the six presses operated by this company amounts to \$70,000 annually, an amount equal to about 170 per cent of the total investment in equipment.

The trailers employed are worthy of a brief description as they have been especially designed for the work. They are of the four-wheel steer type; that is, the wheels are mounted on steering knuckles, and the front and rear wheels connected with a cross rod so that the rear wheels will track the front ones perfectly. This enables the tractor to draw a train of several trailers around a right angle turn and the last trailer will follow in the same



LOADING HIGH-DENSITY BALES AT THE PRESSES.
A ONE-MAN OPERATION.

tracks as the tractor itself. The platform is low and narrow so that one man can throw a bale across the truck or can tip one off without assistance.

Compress companies, cotton warehouses and textile mills receiving baled cotton, all have a handling problem. Never has this been more important than at the present time of low cotton prices. The daily movement, in many places, is not sufficient to warrant installation of mechanical handling methods, but where a large number of bales must be handled a considerable distance daily, advantage should be taken of the possible savings and increased efficiency by the adoption of the proper mechanical handling methods.

\$2,500,000 MOTION-PICTURE INDUSTRY FOR FLORIDA WEST COAST.

To Be Established Near Tampa—Plans Call for Completion by December 1.

A motion picture production center, estimated to cost ultimately \$2,500,000, will be established on the west coast of Florida near Tampa, according to H. A. Kelly, widely-known moving picture man of that city. New York producers were interested in the new development through the use of more than 1200 photographs showing the scenery and excellent locations afforded as compared with California, with the added advantage of being so much closer to New York city. The photographs demonstrated conclusively that the Florida west coast possesses beautiful lakes, natural jungles, rivers, deserts, rolling country and big hills, magnificent homes, and practically everything necessary in motion picture production. The co-operation of the various boards of trades, chambers of commerce and other bodies will be forthcoming in assisting producers to find the required scenery.

Regarding development, Mr. Kelly has wired the MANUFACTURERS RECORD as follows: "Plans completed for \$2,500,000 film city. Start erection within 60 days. City to consist of 14 buildings and three big out-door stages. The buildings to be constructed of brick, tile, concrete and steel. New arranging purchase material and equipment used. To be completed December 1."

BIG REFINERY NEARS COMPLETION.

Standard Oil Plant at Charleston Most Modern and Complete—Will Produce Large Quantity of Asphalt and Road Oils.

Charleston, S. C., April 22—[Special.]—The newest important oil refinery in the country will shortly be completed and placed in full operation here by the Standard Oil Co. of New Jersey. Charleston was selected as the appropriate site for another big refinery because of its location with respect to distribution of the petroleum products shipped heretofore from Baltimore and Bayonne. The fuel-oil business has assumed such proportions as to supply another important reason for building the refinery at this city.

The plant was designed to run on Mexican crude exclusively, and to produce a large amount of asphalt and road oils, which will make it an important factor in supplying the demand for road materials. The site of the refinery lies two and a half miles from the business section of the city, directly on the new concrete road from Columbia to Charleston. It was acquired in the spring of 1919, and contains 123 acres, providing ample room for growth. The big advantage of the location lies in the extensive frontage on Cooper River, which, together with the Ashley River, give Charleston its natural advantage as a harbor. From the refinery dock to the jetties at the outer edge of the harbor is 11 miles, but vessels may approach within four miles of the dock without the use of tugs. Alongside the dock is 30 feet of water.

A force of about 1000 men was organized to carry on the construction work, and this number had been maintained. Actual work commenced in July, 1919, and was to have been completed in January, 1921, but it will be some time in May before all of the departments are completed and in operation. Practically all of the materials used in the construction of the plant were handled by cars, the site being served by three railroads entering the city, the Seaboard Air Line, Southern Railway and Atlantic Coast Line.

The first shipment of crude oil arrived in November, 1920, on the ship Maricopa, carrying 68,000 barrels, and the first stills were charged on Christmas Day. Lacking facilities for finishing products, the "tops" have been shipped to Bayonne to be finished there, and the remainder to supply bunkering requirements of ships that put into Charleston. As a result of the specialized business, the plant will be an important one in the production of asphalt and road oils, and facilities are being installed to provide for shipping asphalt in packages and tank cars. All other shipments will be in bulk, either by tank car or vessels.

By laying the plant out at one time and building it as a complete unit it has been possible to provide for special methods of operation and obtain much more efficient arrangement than could possibly be obtained where plants have started small and grown as business demanded. Hence, the refinery is a very modern one in oil-treating plants. The power-house is one of the most modern and economical in the country, and is equipped with water-tube boilers of 500 horse-power each, oil-fired, requiring but three men to a shift for operation. The engine and dynamo rooms have an installation of three 750-kilowatt turbine-driven units, together with air compressors, switchboard and other auxiliary apparatus. Storage batteries are provided for lighting purposes in case of emergency. In the yard are 10 continuous crude stills, already in operation; 20 pressure stills, reflex drum type, approaching completion; a battery of 10 re-run stills; three continuous steam stills for finishing white products, to be used principally for the production of gasoline; five asphalt stills; a plant for making asphalt drums; a filling building for the drums; a garage; a modern laboratory and testing-room; modern fire-fighting apparatus; carpenter, boiler, machine and pipe shops; facilities for the Medical Department and Annuities and Benefits Department; company-owned railroad track; a dock 1200 feet long.

Because of the marshy condition of the land, it was necessary to build a trestle 4200 feet long from the shore to the dock, and on it are four pipe lines, the most important being a 16-inch line to carry crude oil from the tankers to the refinery. The other three are designed to carry products in the other direction.

Why the Open Shop Is a Success in Little Rock

ITS ORGANIZATION A RESULT OF UNION DOMINATION AND VIOLATION OF PLEDGES BY UNION PLUMBERS—THE CITY NOT UNFRIENDLY TO UNION LABOR, BUT INSISTS ON FAIR PLAY FOR ALL.

Little Rock Board of Commerce.

Little Rock, Ark., April 12.

Editor Manufacturers Record:

I have received a copy of your recent bulletin and the article "The Open Shop Leads to National Safety and the Closed Shop to National Death: Which Will You Choose?" and I want to enclose for you the January number of Community Service, published by the Mt. Vernon (Ohio) Chamber of Commerce.

Little Rock has become the object of attack of labor unions throughout the country, for the reason that we have successfully put over the open-shop policy in this city.

Our interpretation of the open shop is that anyone can work who wants to, and one of the first men to go to work under the protection of the Little Rock Board of Commerce after declaring for the open shop in the interest of the building trades in this city was a union bricklayer, and he was permitted to go to work without any discrimination, and has remained at work ever since. His desire to work and his ability to do work has kept him employed, and he and his family are better off and in better circumstances than they ever were under union organizations, where they were required to contribute dues and have their work apportioned out to them so as to give the other fellow a chance, regardless of whether the other fellow had the ability and ambition to do a day's work or not.

Little Rock has not done much talking about her accomplishment in putting over the open-shop proposition, but anyone is at liberty to come to this city and go through the records in the City Hall and take list of the building permits issued during 1920 and check up the people who did the work in the construction, and the results will be 92.3 per cent under the open shop and 7.7 per cent under the closed union shop plan. This, too, during the year of the largest building program ever put over in this city, and for the first time in the history of the city large buildings have been constructed exactly on schedule or on less than schedule time, the schedule as figured by the architects when the contracts were let. For instance, on one of the largest wholesale buildings in the city, when the contract was let in the early part of 1920, the 1st of January, 1921, was the time set for delivery to the owner. Actually, several floors were occupied early in December. Such a thing as this was without a precedent heretofore in this city.

A large church which is now under construction and being built by open-shop labor timed the collections or donations from the parish according to the anticipated development in the construction, and the building is running away ahead of what was anticipated.

Commencing in December, 1919, when this city declared for the open shop, with every principal merchant in the city signing the pledge to support it (both wholesale and retail), leaving the union organizations without the formidable weapon of boycott, the fight was very bitter, but very short-lived. Within 30 days the open shop had been organized and established, and this at a time when the building construction in this country was at its peak, and they said that we could not recruit open-shop laborers; that such things as non-union bricklayers, plasterers, etc., could not be secured in this country. However, they were secured, and from that time until this letter is written our building program has gone on uninterruptedly in the ratio as shown by the above-mentioned percentage under each construction.

The former walking delegates who used to stand on the streets continually intimidating the open-shop men have all taken their tools and gone to work, either in this city or elsewhere. This is a record that I do not believe has been secured in any other city in the country.

A great many of the men working today under our open-shop organization are men who formerly were connected with the union organizations, and they are treated just the same as those who came here as non-union men, and they all look alike to this association. We have only one slogan, "An honest day's work

for a fair day's pay," and our labor troubles ended with that declaration.

Our original pledge carried no discrimination against the union. The Board of Commerce pledged themselves only to support those employers who could not, after a fair trial, get along with their union organizations. In other words, if a corporation or employer had contracts with his union men, and they were living up to their contracts and doing a good day's work, and he was satisfied with that condition, the Board of Commerce at no time felt called upon to interfere with that institution or in any way intrude upon the relations existing in that plant.

If, however, there was a break between employer and employee, and it was necessary for the employer to call upon the Board of Commerce to support them, then it would be done, and then only if it was shown by the employer that there was reason for the Board of Commerce to interfere or give its moral support to either one side or the other. No better demonstration can be given of this attitude than the fact that the president of this organization, a very ardent supporter of the open-shop policy as defined in this city, and an active member of the Open-Shop Committee, operates a business 90 per cent of which is operated under a union contract, and the relations between the heads of the firms and the employer have always been pleasant and satisfactory.

Another member, one of the board of directors of this Chamber of Commerce, operates another plant where the employees, under a union contract, were working on a piece-work basis, and they came in and demanded a higher figure per piece, which, on account of the advanced cost of living, was readily granted. The increase amounted to nearly double, and within two weeks after that they again came in and asked that a limit be placed upon the number of pieces each employee should finish. This was promptly refused, of course, as being a restriction of the output, reducing the earning capacity of the capital invested. The employees quit, but in 24 hours the bulk of them went back highly satisfied under an open-shop plan.

The origin of the open shop in this city resulted from the violation of contracts on the part of the plumbers, who named their own figure of pay in June, 1919, for one year, which would have carried them until June, 1920. This figure was satisfactory, and contracts had been made based on the increase, but, notwithstanding this, the plumbers, who felt morally obligated not to ask for an increase in dollars and cents, came in November, 1919, with a demand for a time schedule on the jobs. For instance, a small cottage with hot and cold water with five openings should require a specified number of days to do the work. This schedule was carried on down even to the placing of the radiators in the skyscrapers, mentioning the number of hours to set each radiator in the building, regardless of the conditions under which they were being placed.

After the figures were gone over by all the master plumbers it was found that this increased the labor cost on the jobs nearly 100 per cent, which was more than the contractors could stand with a great many outstanding contracts. The plumbers struck. To enforce their plan, one of their rules was that whenever a plumber went out on a job with a blueprint, he was to come by the headquarters and have the blueprint checked by the business agent at union headquarters, who would specify thereon the time that the man must take on the job.

After the plumbers struck the master plumbers appealed to the Board of Commerce for some relief from their position. The Board of Commerce went into it very thoroughly, had all the documentary evidence brought before the board, supported by the proper and necessary affidavits; called upon the population at large to attend a public meeting, where the necessary declarations were made, public opinion was expressed and petitions were signed by over 2400 of the business men of this city and properly published in the daily newspapers.

This was the beginning of the end of the labor unions in this city as a dictating factor.

Prior to that time this city had been unusually friendly to the interests of union labor, by reason of the fact that at this point are located some very large railroad shops, and in catering to that trade almost all our merchants had required that before a man could nail up a shelf in their stores he must belong to the proper union. This was not altogether from selfish motives, but because we felt, as was felt all through the West and Southwest, where people are ordinarily very liberal in their views and believe in giving everybody fair play, that the union movement was the only salvation for the laboring man.

Beginning, however, with the passage of the Adamson Law, the continued influences being exerted by labor unions in the political affairs of our National Government had been having its effect on the minds of the people. The same thing is true of the operations of labor organizations as of the operations of any other organization; that is, if you can't get what you want from the man directly over you, you had better either make yourself satisfied or get out into some other job, because whenever you take your problem over your immediate superior's head you get yourself disliked, and that is the way the nation took the Adamson Law.

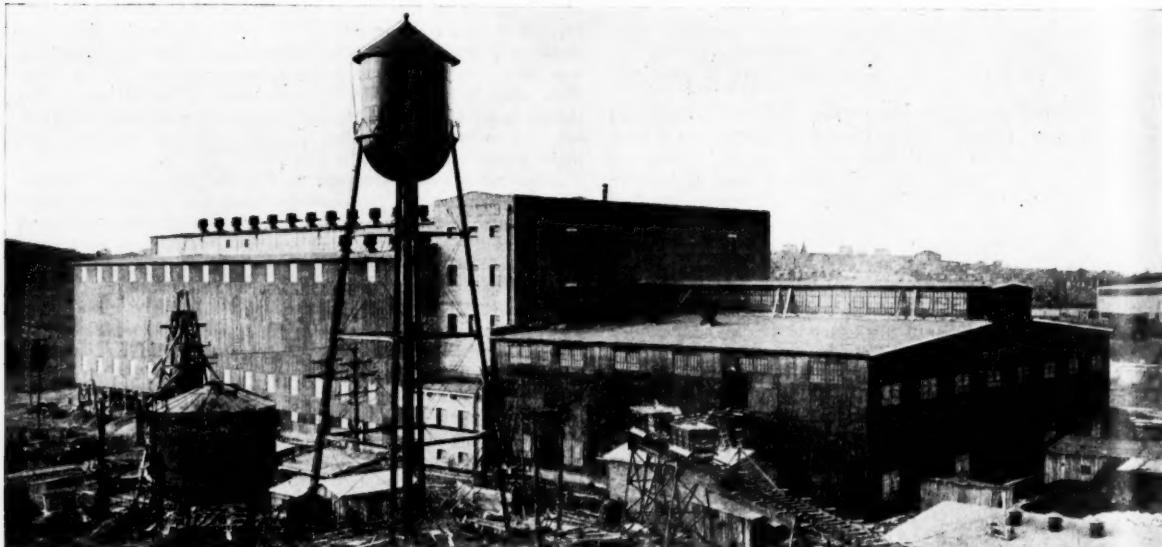
Being unable to enforce their demands on the people whom they were serving, the labor organizations took these demands over the heads of the people and went to Congress and the President of the United States. That was disastrous for the unions, and in the end it will be shown they did the country a great favor in that they aroused it to a situation which has gradually been involving this country deeper and deeper without being recognized as a danger.

GEO. FIRMAN, Manager.

Preparing Plans for \$250,000 Bank at New Orleans.

New Orleans, La., April 22—[Special.]—Improvements to the Federal Reserve Bank Building here will, when completed, cost approximately \$250,000, including improvements to the building itself estimated to cost \$171,000, and necessary vault equipment costing from \$75,000 to \$100,000. The plans were placed before the Board of Directors of the Federal Reserve Bank of Atlanta on April 8, at a meeting held in New Orleans, and called for a rearrangement of the two floors of the building and the erection of an additional story. Authority was granted for employing an architect to draft detailed plans, submit the plans for bids and then turn them over to the bank directors at Atlanta, who will in turn submit them for final approval to the Board in Washington. R. S. Hecht, president of the Hibernia Bank & Trust Co., of this city, is chairman of the local committee.

LARGE PLANT OF UNION ACID WORKS, INC., CURTIS BAY, MD.



Newly erected plant for manufacture of sulphuric acid, with capacity of 250 tons daily made from Southern brimstone. Burner room, tower and chamber buildings, overhead narrow-gauge tramway, water and acid-storage tanks shown.

\$1,500,000 KEMP HOTEL AT WICHITA FALLS, TEXAS.



Kemp Hotel, recently completed at Wichita Falls, Tex., at a cost of about \$1,500,000; 9 stories; brick construction with terra-cotta trim; 225 rooms, each equipped with lavatory and toilet and majority with bath; Richards, McCarty & Bulford, architects, Columbus, O.; Selden-Breck Construction Co., contractor, St. Louis; other contractors include J. O. O'Connell Paint Co., painting; Carrs Electric Co., electric wiring; Rogers-Schmidt Company, ornamental iron works; Huttig Sash & Door Co., millwork; P. Rowen & Sons Co., plastering; all of St. Louis; Sam A. Rice, Oklahoma City, plumbing; Kennison Bros., Dallas, heating; Otis Elevator Co., New York, elevators; American mosaic & Tile Co., Louisville, Ky., tiling; Pittsburgh (Pa.) Plate Glass Co., glazing; Lautz-McNerney Marble Co., Carthage, Mo., marble work.

Building Activities Double in Anniston.

Anniston, Ala., April 21—[Special.]—During the first three months of this year the valuation of new construction of all kinds amounts to \$102,700, compared with \$83,500 for the same period last year. During January permits had a valuation of \$62,200; in February, \$35,800, and in March, \$4700. Prospects are bright for increased building activity during the summer months.

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A \$52,000,000 Bank for Baltimore—Largest in the South.

The directors of the Merchants National Bank and the National Bank of Commerce, both of Baltimore, have agreed to consolidate their banks, so that there will soon be established in this city the largest bank in the South, with total resources of about \$52,000,000, the resources of the Merchants being over \$37,000,000 and the Bank of Commerce over \$15,000,000. The president of the new bank thus formed, which will take the name of the Merchants National Bank, will be Thomas Hildt, 38 years of age, who about 6½ years ago left the position of vice-president and cashier of the National Bank of Commerce to become an officer of the Astor Trust Co. of New York, and who is now vice-president of the Bankers' Trust Co. of that city, which absorbed the Astor Trust Co. It will take several weeks to complete the merger, as 30 days' notice to the stockholders of the banks is requisite.

The plan of consolidation provides that the stock of the Merchants National Bank shall be increased from a total of 250,000 shares to 400,000 shares, and that the 80,000 shares of stock of the National Bank of Commerce shall be acquired by the exchange of 1½ shares of Merchants Bank stock for each share of Bank of Commerce stock. The par value of these stocks is, respectively, \$10 and \$15 per share, but Merchants Bank stock has lately sold steadily at about \$24 a share and Bank of Commerce stock at about \$35. The capital of the new bank will be \$4,000,000.

Mr. Hildt will be president of the newly created bank. Mr. Ramsay will become chairman of the board, and Mr. Levering chairman of the executive committee. The vice-presidents will be H. B. Wilcox and John H. B. Dunn of the Merchants and G. Harry Barnes of the Bank of Commerce. S. W. Tschudi, cashier of the Merchants, will retain that post. Assistant cashiers will be J. Walter Oster (now cashier of the Bank of Commerce), Magruder Powell and H. W. Owings (assistant cashiers of that institution), and Chas. Hann, John T. Flynn and J. C. Wands of the Merchants Bank.

New University Buildings and Other Structures at Raleigh.

Raleigh, N. C., April 20—[Special.]—Great public spirit is being shown by the alumni of the University of North Carolina and the farmers' association of the banner county in the State in point of agricultural organization, Catawba. The former offer to take \$500,000 of the bonds, 5 per cents, authorized for improvements of the university. The Catawba county farmers offer to take all the bonds required for the building of the Central Highway, hard surface, through their territory.

The congregation of the Pullen Memorial Church at Raleigh will begin work in June on a new church to cost at least \$150,000. It will adjoin the campus of the State Agricultural and Engineering College, and will face the Central Highway. It is to be a memorial of John T. Pullen, who died six years ago, and was the most remarkable religious worker this city has ever known. Mr. Pullen's uncle, the late Stanhope Pullen of Raleigh, made a gift to this college of 70 acres of land for its campus, and on this stand its numerous buildings. The college has purchased more than 1000 acres of adjoining land for its farm and dairy and demonstration work. The church will fit in handsomely with the fine surroundings. The design is by a Charlotte architect.

Work begins in May on a grandstand of reinforced concrete at the State Fair Grounds at Raleigh. The cost will be from \$25,000 to \$30,000, and it will seat 4000 people. Underneath will be cafes. The grandstand, of wood, was burned in the summer of 1919, while motorcycle races were in progress, the fire originating from the careless dropping of a cigarette or match. The fair next October will be in the main agricultural, and great attention will be paid to stock. Mrs. Edith Vanderbilt of New York and Asheville is its president, and her interest in it is keen. She says she expects a wonderful exhibit from the high mountain region of North Carolina. It is now stated that the freeze in the early part of the present week has done vast damage to the mountain fruit crop.

As soon as the State Treasurer provides the money work is to begin on the highest program of building ever undertaken at the State College of Agriculture and Engineering here. The agricultural extension building, to cost \$200,000, will house all the extension forces and also provide additional agricultural classrooms. The mechanical engineering building will be doubled in size, at a cost of \$100,000. A dormitory for 200 students will cost \$140,000. The mess hall, now seating 800, will be doubled in size at a cost of \$50,000. On the heating system \$50,000 is to be spent; laundry, \$20,000; general repairs of buildings, \$20,000; improvement of grounds, including concrete drives and walks, \$20,000. Two new dormitories are nearly finished, and will be occupied by the Summer School, which begins June 14, a few days after the regular term at the college ends. Later there is to be a gymnasium and armory and five other buildings, one each for the departments of physics, chemistry, horticulture, agricultural engineering and the State agricultural experiment station. There are 1105 students, and the senior class has an even 100 members. The college began work in October, 1889.

The Legislature at its recent session made the listing of crop reports mandatory. Heretofore county commissioners have not been required to make these important reports. So last year 7 of the 100 counties failed to make reports. Now the tax lists are required also to list crop acreages and the commissioners to advertise the fact that this will be done. The lists will show the acreages of all crops, horses and mules and oxen worked, bee-hives and various other things. The information sent to the State Agricultural Department here will be compiled in December; too late to be of benefit to speculators, but early enough to guide the farmers in the next year's planting.

Residence Construction Leads in Houston.

Houston, Tex., April 22—[Special.]—Building permits issued during the past three weeks here have a total valuation of more than \$700,000. Last week alone the permits issued had a valuation of \$353,839. Of this amount, \$200,000 will be expended by the Texas & New Orleans Railroad in the construction of a new paint shop and storeroom to replace similar structures destroyed recently by fire at the company's shops on North street. Of the 47 other different building projects, practically all are for cottages, bungalows and alterations and repairs to residences. As a result scores of dwellings are being constructed in various parts of the city, in addition to apartment-houses, store buildings and private garages. It is predicted that it will not be long before there will be very few unoccupied building lots within the present city limits, so rapidly is the building of houses going forward.

Large Oil Tanker Ready for Launching.

Tampa, Fla., April 16—[Special.]—What is said to be the largest vessel built south of the Virginia capes will be launched early in May from the yards of the Oscar Daniels Company here. It is the old tanker T. J. Williams, of 11,900 tons deadweight, and built for the Standard Oil Co. It exceeds by about 1500 tons the 10,400-ton tankers built at Mobile. The new vessel will be 480 feet long, and will cost approximately \$2,000,000. A second ship of the same size is also under construction at the local yards, and will probably be ready for launching in about two months.

The City of Brunswick, the last of the ten 9500-ton freighters to be built for the United States Shipping Board, is about ready to be turned over for use. It is 415 feet long, 54 feet beam, and complete in every detail.

Plan for \$400,000 Bank and Club Building at Oklahoma City.

Oklahoma City, Okla., April 22—[Special.]—Plans have been prepared by Hawk & Parr, architects of this city, for a structure to house the Oklahoma Club and the Farmers National Bank, to be constructed at a total cost estimated at \$400,000. The building is to be of five stories, 85x140 feet, of reinforced concrete, frame, with brick and stone walls. The floors will be of concrete, marble, tile and oak, and the structure will be heated by means of a low-pressure steam system. Two passenger and one freight elevators are to be installed.

INDUSTRIAL CANAL DEDICATION MAY 2.

Summary of Construction Work Shows Low Figure for Unit Costs.

New Orleans, La., April 15—[Special.]—Cost units on building the industrial canal, with its great lock, which is being dedicated May 2 during the convention of the Mississippi Valley Association, show that the work was done at remarkably low cost, everything considered. The work was largely done during the period of mounting prices.

The canal is 5½ miles long, connecting the Mississippi River and Lake Pontchartrain. It has been dredged to a depth of 26 feet and a width of 150 feet. It will be deepened to 30 feet and widened to 300. The dredging was through stratified layers of sunken forests estimated by geologists to be 20,000 years old. Four large steel railway and traffic bridges of the bascule type cross the canal, requiring deep excavations for the foundation. There were two other deep excavations—for the inverted siphon, which will carry the city's drainage underneath the canal, and the lock site, nearly 50 feet deep. The lock is 150x1020 feet, outside dimensions; usable dimensions are 75x600 feet.

Unit costs of construction work are summarized as follows from the records of the engineering department of the dock board, which built the facility:

Dredging, including the canal prism and the excavation of the sites of the bridge foundations, siphon and lock, averaged .2784 cents a cubic yard. The highest cost was in the lock section, from which 609,302 cubic yards were excavated at an average cost of .3796 cents a cubic yard. On the siphon and Florida avenue bridge section, including two other deep cuts, the 814,919 cubic yards excavated cost an average of .2607 cents a cubic yard. On the Louisville & Nashville bridge section the 1,023,466 cubic yards excavated cost an average of .2363 cents a cubic yard. From there to the lake, 1,673,787 cubic yards, the average cost was .2411 cents. Dredging costs were below the original estimates, when labor and supplies were 50 per cent cheaper.

The 90,000 cubic yards of concrete in the lock cost an average of \$22.50 a cubic yard. This includes cost of material, mixing, building forms, pouring, and stripping forms. Mixing and pouring, from the time the material was handled from the storehouse or pile, averaged \$1.20 a cubic yard. It would be hard to find cheaper concrete on a work of similar magnitude anywhere, say the engineers.

On the siphon the concrete work cost more, because it was a subterranean job, with elaborate shaping. The price there was \$35 a cubic yard, in place, including materials and form work.

To drive the 17,000 bearing piles and 7000 traveling piles on which the lock is floated cost an average of 15 cents a running foot. This does not include the cost of the piling.

Construction steel cost 12 cents a pound and erection around 4 cents. These were standard prices.

The lock gates, weighing 5,285,000 pounds, cost \$845,600, in place. This does not include opening and closing machinery.

Three of the bascule bridges crossing the canal, weighing 1,600,000 pounds each, cost \$250,000 each, erected. The fourth bridge, near the lock, weighing 1,000,000 pounds, cost \$200,000, erected. This is for superstructure only; it does not include the foundation.

The emergency dam bridge, weighing 350,373 pounds, and its 108,256 pounds of turning machinery, cost \$96,728, in place. Hoisting machinery cost \$40,000 more.

The eight girders of the emergency dam, weighing 90 tons each, at \$240 a ton, cost \$172,800.

Machinery for working the 10 lock gates, the eight filling gates and the six capstans—24 52-horse-power electric motors—cost \$21,479, f. o. b. New Orleans.

The plant for unwatering the lock, consisting of one pump with a capacity of 15,000 gallons a minute, and two with a capacity of 250 gallons each, cost, erected, \$11,000.

Total mechanical equipment used on the industrial canal weighs 14,500 tons. Its cost, including power-house, electrical connections, etc., is \$1,516,000.

Plant and equipment for building the canal, including locomotives, cranes, piledrivers, dredges, tools, automobiles, etc., cost \$781,232. Depreciation, up to February, 1921, is set at \$266,874,

leaving a balance carried as assets of \$514,358. Much of this has already been sold, and more will be disposed of.

Following are the outside firms that executed contracts on the canal:

Lock gates and emergency dam girders, McClintic-Marshall Construction Co., Pittsburgh, Pa.

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Miscellaneous valve equipment, Ludlow Valve Co., Troy, N. Y.

Capstans, American Engineering Co., Philadelphia, Pa.

Mooring posts, Shipbuilding Products Co., New York, N. Y.

Miter gate moving machines, Fawcett Machine Works, Pittsburgh, Pa.

Motors, control boards and miscellaneous electrical equipment, General Electric Co., Schenectady, N. Y.

Bascule bridges and bridge crane, Bethlehem Steel Corporation, Steelton, Pa. Former designed by Goldmark & Harris Company, New York, N. Y.; latter by Strauss Bascule Bridge Co., Chicago, Ill.

Steel sheet piling, Lackawanna Steel Co., Buffalo, N. Y.

Hoists and cranes, Orton & Steinbrenner, Huntington, Ind.; American Hoist & Derrick Co., St. Paul, Minn.

Conveyor equipment, Webster Company, Tiffany, O.; Barber-Greene Company, Aurora, Ill.

Woodworking machinery, Fay & Egan Company, Cincinnati, O.

Pipe, U. S. Cast-Iron Pipe Co., Birmingham, Ala.

Lumber and piling, Hammond Lumber Co., Hammond, La.; Great Southern Lumber Co., Bogalusa, La.

Dredges, Bowers Southern Dredging Co., Galveston, Tex.; Atlantic, Gulf & Pacific Company, Mobile, Ala.

The following firms in New Orleans also executed contracts:

Cinder and earth fill, Thomas M. Johnson.

Levee work, Hercules Construction Co.; Hampton Reynolds.

Sand and gravel, Jahncke Service, Inc.; D. V. Johnston Company.

Cement, Atlas Portland Cement Co., the Michel Lumber & Brick Co. being local agents.

Lumber and piling, Salmen Brick & Lumber Co.; W. W. Carre Company, Ltd.

Coal, Kirkpatrick Coal Co.; Tennessee Coal, Iron & Railroad Co.

Reinforcing steel and supplies, Tennessee Coal, Iron & Railroad Co.; Ole K. Olsen.

Rail and track accessories, A. Marx & Sons.

Concrete mixer, Fairbanks Company.

Repairs and castings, Dibert, Bancroft & Ross; Joubert & Goslin Machinery & Foundry Co.; Stern Foundry & Machinery Co.

Co-operative Marketing System for Texas Wheat.

Pampa, Tex., April 22—[Special.]—Plans for the marketing of the coming wheat crop of Texas on the co-operative system by the Texas Wheat Growers' Association are well advanced, according to C. C. Dodd, secretary. He said that the sole purpose of the association, the organization of which is based on the California plan, is to sell the wheat crop to the best possible advantage, and it is believed no difficulty will be experienced in forming an initial pool of not less than 5,000,000 bushels of wheat. In fact, pledges for this amount already have been practically assured. It is expected that the total wheat production of the State will be in excess of 30,000,000 bushels, inasmuch as there is a large increase of acreage this year and the grain is in good condition at this time.

Urge More Hog-Raising in Texas.

Dallas, Tex., April 22—[Special.]—The Texas Chamber of Commerce and the Texas Agricultural and Mechanical College Extension Service have launched a campaign to encourage hog-raising in the State. A. L. Ward, swine specialist of the extension service, says: "Texas farmers can save \$24,000,000 annually by growing their own pork products from the waste of the kitchen and feed lots. There are 450,000 farms in Texas, and about 200,000 of these are not growing their own meats. On each of these farms two shoats dressing 180 pounds can be produced from waste, making a total of 72,000,000 pounds of pork products, worth not less than 33½ cents a pound, or a saving from waste of \$24,000,000."

Salvation of Southern Agriculture Dependent on Cotton Curtailment.

The following letter, written by Mr. W. B. Thompson of New Orleans to a Louisiana cotton planter, replying to an inquiry for his opinion as to the present situation, contains some facts which are of general interest to all branches of the cotton trade:

"I am very much gratified to know that you will conduct your large planting operations in accordance with the Memphis plan of cotton acreage curtailment and corresponding increases in the acreage to other crops. The salvation of all of us interested in Southern agriculture depends upon a radical curtailment of cotton acreage and production.

"I am sure that our efforts along this line will be successful. The larger, more independent planters like yourselves and those who understand the situation will, under the dictates of business judgment and as a measure of individual profit, radically reduce. Those other and more dependent planters who, either through ignorance, habit or a mistaken policy of selfishness, would adhere to the old fallacy of excessive cotton acreage, will be compelled by credit restrictions and necessity to curtail their production to a very material extent. They simply will not be able to secure the means with which to plant and make other than a very small crop of cotton.

"I have heard a few men argue that if the larger producing States like Texas and Georgia do not adhere to the curtailment plan, then there is no reason why the other States should do so. The answer to this argument is obvious. If the great cotton-producing States do not materially curtail, that fact in itself is the best reason in the world why everyone else should plant less, because in such case the price of cotton will go so low that the less any man plants the better off he will be. In other words, if anything like a normal crop is planted, practically the entire cotton-producing industry will go "broke." The less any man plants, therefore, the less he will lose.

"But, in my opinion, only a radically reduced acreage will be planted to cotton throughout the entire South, for the very simple reason that the funds for other than a very short crop are not and will not be available. I have heard some superficial argument to the effect that the advanced state of cultivation existing in many sections means that a large cotton acreage will be planted. This conclusion is a rank fallacy. Preliminary cultivation of the land does not mean a full cotton acreage unless the farmers had the means wherewith to plant a full cotton acreage and to cultivate a full cotton crop. It is undoubtedly a fact that the farmers of the South have not these means and will not be able to procure the same.

"On a recent trip through the State of Georgia I was struck with the advanced state of cultivation, but it was explained to me, as I already knew, that on account of the very propitious weather conditions the farmers have plowed their lands, because it was the natural thing for industry to do, and they have done this without knowing how much acreage they could put into cotton, because they have not yet made arrangements for the credit necessary to make the crop. Credit is the crux of the situation. These farmers have not bought fertilizer, and they will find that the bankers and merchants will not only be unwilling, but to a large extent unable to advance the means wherewith to plant other than a very small cotton acreage and to finance the making of other than a very short cotton crop. It would be of great benefit to all farmers to take note of this phase of the situation in order that they may avoid the costly mistake of starting something which they cannot finish.

"I was very much impressed with a fact emphasized by Mr. Edmund Richardson in connection with the corn situation of the South. One of the arguments heard from reactionaries who are opposed to curtailment of cotton acreage and to increase of corn acreage is that at the price of corn it would be cheaper to make cotton and buy corn than to make the corn. It is true that corn is cheaper than heretofore, but in this argument the fact, as pointed out by Mr. Richardson, is that the cost of transportation of corn from the West is overlooked. At the present excessive rates of freight, corn will cost approximately \$1 per bushel delivered at Louisiana points (and it is not at all likely that there will be any early reduction in such rates), which fact absolutely explodes the contention that it is cheaper to buy corn than to make it.

"Furthermore, under the existing transportation rate conditions the Louisiana farmer who has a surplus of corn can find a market for such surplus in the domestic jobbing centers. The freight rate on Western corn is 40 cents, whereas the rate from the Louisiana farm to the Louisiana jobbing centers is approximately 5 cents. The Louisiana grower, therefore, has a margin of approximately 35 cents under the Western corn seller in domestic market.

"It follows, therefore, that a radical reduction in cotton and a radical increase in corn and other crops will not only reduce the cost of cotton production and materially enhance the price to be obtained for the commodity, but will open up additional sources of profit which the Louisiana farmer has not heretofore enjoyed."

Cotton Acreage Reduction of at Least 30 Per Cent Predicted for Lower Mississippi Valley.

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When the so-called "Memphis Plan" for reducing cotton production was adopted last winter, Dr. Lloyd expressed the belief that a 20 per cent reduction would be a good showing despite the fact that the Memphis Plan proposed 50 per cent. Since that time Mr. Lloyd has made a personal visit in the long-staple production area, and his conservative figures have been raised.

At least 20 per cent of the reduction in acreage this year will be voluntary, in Dr. Lloyd's view. Another 10 per cent reduction will be involuntary, caused by inability of the farmers and planters to make financial arrangements for a bigger crop.

To the 30 per cent reduction Dr. Lloyd believes that another 10 per cent cut can be reasonably expected because of ravages of the boll-weevil, indicating that, in his opinion, the lower Mississippi Valley will produce about 60 per cent of the cotton that was produced last year. Feed crops, gardens and a "live-at-home" program of farming is being very generously adopted by the farmers of the particular section, declared Dr. Lloyd after his inspection tour.

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The organization meeting was addressed by Aaron Sapiro, the

originator of the California plan. It was called by the Elbert County Farmers' Association, and had in attendance representatives from about 80 of the 150 counties in the State.

Among the salient features of the contract which the members must sign are the following:

The association is a nonprofit organization, and has no capital stock.

It is exempt from the Sherman Anti-Trust Law, and only bona fide cotton growers or landlords, paid in cotton, are eligible to membership.

The State would be divided into 20 districts, each district representing one-twentieth of the total crop production of the State. Each district would elect one representative on the board of directors, while three additional directors would be appointed by public officials.

An executive committee of from five to seven members would handle the business of the association.

Each member of the association has one vote, and an entrance fee of \$5 is charged.

The contract does not become operative until 300,000 bales of cotton have been signed up, which must be by January 1, 1922.

The cotton grower entering the association agrees to turn over his entire cotton crop to the association for a period of five years. All cotton is graded and pooled according to grades.

South Carolina Joins in Movement for Co-operative Marketing of Cotton.

Spartanburg, S. C., April 14—[Special.]—Plans for the organization of the South Carolina Cotton Growers' Marketing Association for the co-operative marketing of cotton grown throughout this State have been unanimously approved by the farmers of the Piedmont section, representing Spartanburg, Greenville, Anderson, Oconee, Pickens, Laurens, Union and Cherokee counties. The proposition as outlined here several months ago by Aaron Sapiro of California is to be followed.

A meeting will be held in Columbia at an early date to consider preliminary details and form a temporary association. A charter will be applied for, after which contracts will be signed with the cotton growers of the State and permanent organization effected.

Movements for the formation of co-operative marketing associations have been launched in Oklahoma, Texas, Mississippi, Arkansas and North Carolina, and all are said to be progressing favorably.

Fertilizer Sales Increase—Early Vegetables Moving.

Birmingham, Ala., April 18—[Special.]—Fertilizer sales in Alabama took on a decided increase during the past week, indicating that the farmers are giving some attention to their fields. The aggregate sales, however, were not sufficient to warrant any statement that any extraordinary effort is being put forth. Casual investigations show that in many directions greater attention is being directed toward food products, and that there will be bountiful crops. Cotton is given only halfway attention, it is reported, though in some sections farmers are not yet free from the idea that there must be cotton grown.

Early vegetable and strawberry growers have found a ready market for their products. Great quantities are being shipped. In Cullman county big strides have been made in recent years in the conservation of sweet potatoes, special houses being erected for their preservation from one season to another. Heavy shipments are now under way, with prices above those prevailing during the season. Plans call for an increased acreage this year.

Many farmers in Cullman county are still holding their cotton, not half of the crop of 1920 having been marketed.

Asheville Issues Nineteen Permits in Day.

Asheville, N. C., April 21—[Special.]—The Board of City Commissioners recently issued 19 building permits in one day, with a total valuation of \$20,325, the largest amount of building authorized in one day this year. Five dwellings, costing from \$2000 to \$5000 each, were included, in addition to many permits for alterations and repairs to residences costing \$75 and up.

Engineering Societies Meet—Committee at Work on Plans for Elimination of Waste in Industry.

Philadelphia, April 25—[Special.]—The meeting of the Council of the Federated American Engineering Societies, held in this city on April 16 at the Engineers' Club, was one of the most important in the history of the organization. Progress was noted in every direction.

Herbert Hoover, Secretary of Commerce, resigned from the presidency of the Council, giving as his reasons that the Council by its constitution was necessarily engaged in furthering national activities which involve legislation, and that he as a member of the executive branch of the Government could not consistently direct such activities as an officer of the Council. The resignation was accepted, and the Council in a resolution of regret at the retirement of Mr. Hoover voted its appreciation of his leadership during the organization period of the Council and his initiation of policies and effort.

One of the most important matters before the Council was the report of the Committee on Elimination of waste in Industry. The committee has been conducting an assay of waste in principal industries for more than three months. The first reports of the assay will be ready in June. It is not too early, said the report of the committee, to indicate some of the benefits to be derived by American industry from the report of the Committee on Elimination of Waste in Industry.

"First—Shop managers will find in the report a method of measuring the relative standing of their organizations and will find positive suggestions as to improved methods. * * *

"Second—The finding will indicate the major factors which contribute to waste and their relative weight. * * *

"Third—The finding will indicate how each form of waste has been reduced or eliminated in certain industries.

"We believe that long steps toward general improvement can be taken by voluntary action under the inspiration of such agencies as the Federated American Engineering Societies and the Department of Commerce. Standardization alone will account for immense savings and the elimination of very costly wastes. Stabilization of manufacturing will remove some of the most serious causes of labor unrest and go a long way toward inaugurating a regime of co-operation between management and men. These changes can only be accomplished by directed group action."

Louisiana Farm Labor Supply Exceeds Demand.

New Orleans, La., April 18—[Special.]—The supply of farm labor in Louisiana is greater than the demand, according to the April report of Lionel L. Janes, Agricultural Statistician of the Bureau of Crop Estimates of the United States Department of Agriculture, stationed at New Orleans.

According to statistics compiled by Mr. Janes, the labor supply is 107 per cent compared with 92 per cent for the same period last year, and the demand is 73 per cent, compared with the same period last year, and 78 per cent of the normal demand.

The agricultural labor supply of the entire United States averages 95 per cent, and the demand 87 per cent of normal. Mr. Janes' figures show.

The shortness of funds and the high cost of labor are factors in holding down the demand for labor in Louisiana. Employing farmers are doing more of their own work than ever, and putting only the best land into cultivation. The indications are that this year's crops will be among the cheapest produced in the State, everything considered. Diversification, too, is being practised on a greater scale than usual.

Curb Market for Farm Products at Helena, Ark.

Memphis, Tenn., April 16—[Special.]—A system of curb markets, where farmers and consumers meet and barter, has been established in Helena, Ark., and the results of the first day's activities gave the "safe farming" plan an excellent "boost." A farmer living near Marvell, Ark., sold a load of vegetables to Helena housewives for a total of \$125, which he had collected in cash before 1 o'clock in the afternoon of the day he visited the market.

Shipping Board Ruling Removes Competition Between Gulf Coast Vessels.

New Orleans, La., April 22—[Special.]—Shipping Board vessels will be operated out of Gulf ports, from now on, by steamship companies domiciled on the Gulf. This announcement was made recently by the Shipping Board in New Orleans. The new allocations are effective at once. The effect is to remove all competition between each other.

Under the new schedule all berths in the United Kingdom from New Orleans, Galveston and Texas City are assigned to the J. H. W. Steele Company, the largest operator of Shipping Board vessels on the Gulf. The Steele Company formerly had Liverpool, Manchester, Bremen, Hamburg and the French Atlantic. It will now maintain a minimum of one sailing a month to Dublin, Belfast and Glasgow, Liverpool and Manchester, Bristol channel ports, Hull, Leith, Newcastle and Dundee and London and Southampton.

The Mississippi Shipping Co. is assigned the French Atlantic, Antwerp and Ghent. It formerly had Glasgow and Scandinavian ports. Its South American allocations are not changed.

Lykes Brothers Company will have Hamburg, Bremen, Rotterdam and Scandinavian ports from New Orleans and Galveston, instead of Rotterdam, London and Hull.

Trosdal, Plant and Lafonta is assigned everything east of Gibraltar on the Mediterranean and Adriatic, except the Spanish Mediterranean, giving up the latter ports and Hull.

To the Tampa-Interocean Company go the ports of Spanish and Portuguese Atlantic, Spanish Mediterranean and the north coast of Africa west of Bizenta, the latter jointly with Trosdal, Plant and Lafonta.

Transatlantic Shipping Board operators from Mobile, Gulfport and Pensacola will be the Waterman Steamship Co., serving the United Kingdom, Bremen and Hamburg, and Page and Jones, with Scandinavian ports, Rotterdam, Antwerp, Ghent and the French Atlantic.

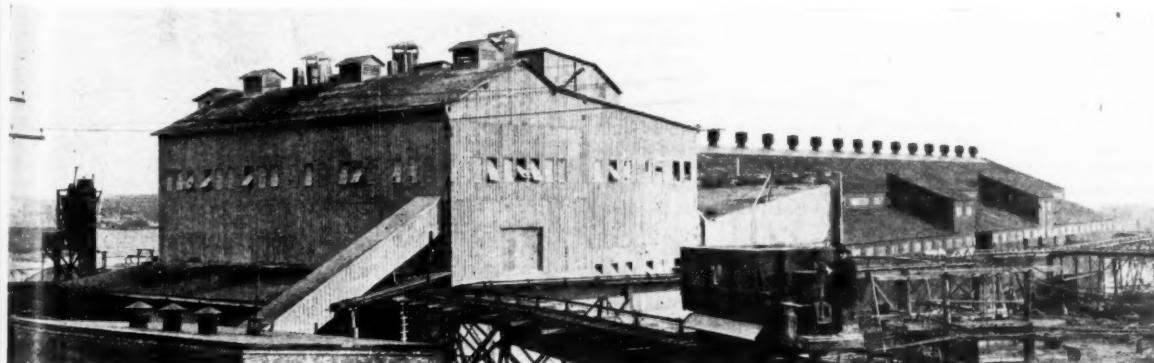
From Galveston, in addition to the Steele Company, and Lykes Brothers, will be S. Sgicovich & Co. Its berths are French Atlantic ports, Antwerp and Ghent.

Eliminated by the Shipping Board orders as operators of Government vessels out of New Orleans are the Kerr Steamship Co. and the Cosmopolitan Line, both of which have headquarters in New York.

Sugar Production From Maguey Plant.

Monterey, Mexico, April 1—[Special.]—Manufacturing sugar from the juice of the maguey plant may become a big industry in Mexico, as a result of successful experiments that have just been made. Many hundred thousands of acres are devoted to maguey plantations in the more southern parts of the country. The plants have been devoted heretofore to the production of pulque, alcohol and syrup. It is stated that the sugar which was produced in the experiments was of high grade, and that the cost of its manufacture is less than that of cane sugar.

PLANT OF STANDARD GUANO CO., INC., AT CURTIS BAY, MD.



For manufacture of acid phosphate and fertilizer. The building to the right has just been completed, and the plant as a whole has only recently been placed in operation.

Increased Burlap Imports Through New Orleans.

New Orleans, La., April 14—[Special.]—Millions of dollars will be added to the port business of New Orleans through the decision of the Bemis Brothers Bag Co. to take all of its burlap imports away from Pacific and Atlantic ports and give them to New Orleans.

It is estimated by Herman J. Rohling, general traffic manager of the Bemis company, in New Orleans recently, that this business will total 800 carloads a month.

About 70 per cent of this will be moved to factory destinations up the Mississippi River over the Government barge line. On the cargo of the steamer Howick Hall, now discharging 400 cars of burlap for the Bemis account, Mr. Rohling estimates that the freight saving will be between \$9000 and \$10,000. The next ship of burlap is due about April 26.

"Hereafter," he said, "all tonnage for our Memphis, St. Louis, Indianapolis, Kansas City, Omaha and Minneapolis plants will move via New Orleans and the barge lines. Heretofore this tonnage has moved principally through Pacific ports, and some through Atlantic ports.

"Furthermore, we are taking our cotton bagging from the mills in North and South Carolina, destined to our San Francisco and Seattle plants, and are routing it via Mobile and New Orleans for coastwise shipment to the Pacific coast at a saving of approximately \$225 a car."

Adoption of Open-Shop Principles Seen as Inevitable.

New York, April 15—[Special.]—If union labor persists in its attitude of refusing to accept wage reductions there is no alternative but the open shop, said George W. Sisson, president of the American Paper and Pulp Association, at its meeting here this week. Mr. Sisson denied that the open-shop movement was a conspiracy of employers, but said it was produced by the attitude of union leaders in standing out for inflated wages at a time when deflation was general.

It was said that workers in paper mills had received increases in wages of 137 per cent since 1914, and that the wages that year were already the highest in the history of the industry.

Philip T. Dodge, the International Paper Co., said:

"Union labor in our industry means inefficiency. Union labor cannot and never has been able to compete in production with the open-shop mill. We must come to this if we are to survive."

Declarations of a similar nature have been made by the American Steamship Owners' Association, who have announced reductions in the wages of marine engineers amounting to 25 to 20 per cent for May 1. Similar cuts will be made in the pay of other employes. The association controls 2500 ocean-going and coastwise vessels.

The owners say they cannot continue present wage scales and compete with other nations. The employes threaten a general strike May 1 if the reductions are put into effect. The owners have declared for open-shop principles.

Developing Mexican West Coast Oil Fields.

Monterey, Mexico, April 25—[Special.]—In the Pachutla district, State of Oaxaca, several hundred miles to the south of the oil fields of the Tampico region, the Oaxaca Petroleum Co. is drilling two wildcat wells. It owns extensive leases in that region. Several years ago oil in small quantity was found there, and geological indications are said to be favorable for the existence of a productive pool. Large American and British oil interests have recently acquired leases bordering practically the entire length of the Pacific coast of the State. There is also much activity in leasing the oil rights to land in the State of Sinaloa, where drilling is now in progress. One American company is drilling a well near Fuerte, that State. Explorations are also to be started soon in the lower southern part of the peninsula of Lower California, according to official information received here from the City of Mexico.

Burkburnett Pool One of World's Leaders.

Burkburnett, Tex., April 18—[Special.]—With a record production in excess of 100,000,000 barrels of light crude oil since the discovery well was brought in in July, 1918, the Burkburnett townsite pool stands close to the top of the list of the world's oil fields, especially when the size of the territory from which the production has been drawn is considered. The field now has an average daily production ranging from 80,000 to 83,000 barrels, and the high-water mark, which was reached the latter part of 1918, was around 100,000 barrels daily. Few, if any, fields in the world have ever returned such handsome dividends as has the Burkburnett field. The present daily income of the field is far in excess of \$275,000.

The 1918 production was in excess of 31,500,000 barrels, and the present production is at the rate of 2,400,000 barrels a month, or 28,800,000 barrels annually.

Americans Flock to New Oil Field in Mexico.

San Juan Bautista, Mexico, April 25—[Special.]—As a result of the recent discovery of oil near here by a Mexican company, hundreds of Americans and other foreigners are flocking into the State of Tabasco. Tentative contracts for the lease of several hundred thousand acres of land for oil exploitation purposes have been made with the owners of the properties. The well was brought in with an initial capacity of more than 100,000 barrels a day at a depth of less than 3000 feet. The first oil development in Mexico was in the State of Tabasco, in the vicinity of Minatitlan, where the refinery of the Mexican Aguila (Eagle) Oil Co. is situated. The new discovery is situated more than 100 miles from the group of original shallow wells.

Gas From Texas Well May Be Helium.

Pecos, Tex., April 25—[Special.]—An enormous quantity of odorless and noninflammable gas is pouring from a well that has just been drilled in this county. The fact that the gas will not ignite when a match is applied to it leads to the belief that it may be helium in its pure state. As a means of extracting helium gas from a mixture of other elements as it comes from wells in the Petrolia field, near Wichita Falls, Tex., the United States Government, under the direction of the Navy Department, has just built large plants at Fort Worth and Petrolia. Helium is used for the inflation of balloons. A natural flow of helium would be of great importance to the Government.

To Distribute Natural Gas.

Amarillo, Tex., April 25—[Special.]—Construction of an extensive natural gas-distributing system will be started in the Panhandle region in a short time, according to Edward R. Mayer of Amarillo, who, with associates, are promoting the project. The gas supply will be obtained from the wells north of Amarillo. It will be piped to this city, Plainview, Canyon, Hereford, Tulia, Lubbock and a number of other towns.

Export and Import Exposition to Be Held in Baltimore in July.

An export and import exposition will be held in the Fifth Regiment Armory, Baltimore, by the Export and Import Board of Trade of Baltimore during the week of July 11 to 16, 1921.

Representatives of foreign nations in Baltimore and Washington have communicated with their home governments and are co-operating with the Export and Import Board of Trade to have their nationals either participate as exhibitors or attend for inspection of other exhibits. All of the attaches of the United States resident in foreign countries have been fully informed of the purposes of this enterprise, as well as all trade organizations of the United States. Every producer in the Baltimore territory and in the territory adjacent to the port of Baltimore, as well as those in the Southeastern States, the great Middle Western industrial section of the country, has been furnished with full particulars of the undertaking. Export and import firms and commission houses of the United States and all buyers of foreign houses located in this country and those expected to be here about that time also have been informed.

Inquiries in regard to the exposition should be addressed to A. E. MacKinnon, Manager Exposition Department, Export and Import Board of Trade, 106 South Gay street, Baltimore, Md.

Valuable Herd of Pure-Bred Herefords.

Odessa, Tex., April 11—[Special.]—In stocking his 3840-acre ranch, near Midland, Tex., with 105 head of cattle, for which he paid \$216,000, John M. Gist of Odessa becomes the owner of the costliest herd of pure-bred Herefords in the United States, according to the statement of breeders of these animals. There are 100 cows and five bulls in the herd. The cows cost a total of \$116,000. Not one cost less than \$1000. The bulls cost \$20,000 each. These bulls are widely known in Hereford cattle-breeding circles. They are Beau Picture, Paragon Gay Lad, Repeater, Bright Stanway and Domino. All of the cows were carefully selected from registered stock.

NEW \$1,000,000 Y. M. C. A. BUILDING FOR NEW ORLEANS.



Central Y. M. C. A. building to be erected at New Orleans at a cost of about \$1,000,000. The structure will be 86.6 by 135 feet, 12 stories, of stone construction. Shattuck & Layer of Chicago are the architects.

NEWS AND VIEWS FROM OUR READERS

[Publication in this department of letters from our readers does not mean that we either approve or disapprove the views expressed. We believe in a full and frank discussion of the mighty questions of the hour, for only in this way can the truth be found. Therefore we often publish letters with which we do not agree.—Editor Manufacturers Record.]

Seeking Development of Kaolin Deposit.

E. P. SCHUCH, Division of Chemistry, the University of Texas, Austin, Tex.

I am trying to develop the operation of an unusual kaolin which we have here in Texas, one that has the following composition and properties: Silica, 44.9 per cent; alumina, 37.41 per cent; ferric oxide, 1.04 per cent; calcium oxide, 0.55 per cent; sodium oxide, 1.39 per cent; ignition, less water, 14.88 per cent.

It is a white-burning clay of low plasticity, high fire shrinkage, and a very high fusion point, about 1800 degrees. It burns steel hard at cone 6 (1250 degrees C.), with a porosity of about 30 per cent. The material can be supplied washed so as to be uniformly as this analysis shows.

National Unity as Aid to Commercial Activity.

CHARLES OSBORNE, Harriman & Co., Trinity Building, New York City.

As a subscriber to your publication, I have read with interest your efforts to arouse national optimism.

It has occurred to me in this connection that it might be possible to hold a national convention, similar to our great national political convention, where representatives from every section of the country, representing labor, banks, production, manufacturing and distribution, could get together and arrive at an honest understanding of each other's vicissitudes and then and there work out some plan to create national unity in an effort to revive national commercial activity.

The motive that suggested the above is the inference apparent at times that one section of the country is being discriminated against in favor of another.

A Suggestion on Cement Manufacture.

G. W. SOULE, President Soule Steam Feed Works, Meridian, Miss.

I want to call your attention to a matter which I regard as of the utmost importance, that is, the manufacture of cement where the conditions for so doing are particularly favorable and where there are large and increasing quantities consumed, especially in the construction of good roads.

Cement is one of the increasingly important articles of construction, and, being heavy, the transportation costs are usually a very important part of the expense of its use, and, of course, it should be made at whatever point it can be made economically nearest its point of consumption.

I do not think it is made in Mississippi, but the raw material for its manufacture exists in superior abundance. While limestone of the preferred quality for making quicklime is not plentiful, the quality of limestone preferred for cement lies close to the surface of the ground in a large part of the State, notably in the counties of Noxubee, Lowndes and Monroe, just across the line from the coal fields of Alabama, where the needed fuel may be had in abundance and cheaply.

Mississippi has before it the building of roads costing millions of dollars, and a large part of these millions must be paid for cement. If the cement was manufactured at home, a large part of this would be saved.

However, the place where cement may be made more cheaply and profitably than anywhere else in the world is on the Tombigbee River, in the western part of Alabama.

There is on the Tombigbee River, a few miles below its confluence with the Warrior, a Government dam and locks. The power of that dam is going entirely to waste, and it is not available for distribution over the country because there is perhaps one month of each year when there is no power available on account of high water. But for perhaps 11 months of the 12 there are many thousands of horse-power. Not many miles above this dam there exists on the bluffs of the Tombigbee an inexhaustible quantity

of lime rock of the quality preferred for cement-making, and at such height that it can be loaded on barges by gravity direct from the quarries. It has little or no overburden. There is on the banks of the river an abundance of clay, and lime and clay, with little or nothing else, make Portland cement.

Power sufficient can be gotten from the dam for all purposes of the work. In the manufacture of cement manual labor is an almost insignificant part, and it would be no hardship for the labor so employed to take the time when there was no power for holidays.

I do not know that heat derived from electricity has been employed in the manufacture of cement, but it is used for the melting of steel and iron, and, of course, could readily be employed for the burning and drying of cement in the process of manufacture.

The cement made at the dam could be readily transported for distribution to Mobile down the river by barges, also up the river for use at Birmingham and other places.

The power there once installed would cost nothing but the wear and tear of machinery; the material on barges would cost less for transportation than it would cost by land for even a few hundred feet. Taken altogether, the cost of making cement there would probably be less than half it costs at most anywhere else.

Cement has become a very important part of nearly all kinds of construction; its use is very rapidly increasing; it is very important that it can be obtained at the lowest cost possible, and there is no reasonable possibility of there being an oversupply.

Significance of Improvements Under Consideration at Port of Apalachicola.

J. H. COOK, Mayor, Apalachicola, Fla.

A hearing was held in this city on March 15 before the United States District Engineer upon the matter of providing greater harbor facilities at this port. The project calls for a channel connecting the deep water of the river fronting Apalachicola with the Gulf of Mexico, through East Pass entrance, now maintaining a natural depth of 22 feet. The river, providing one of the best fresh-water harbors on the Gulf coast, maintains a natural depth along the city docks, ranging from 15 to 30 feet. The improvement sought for would furnish a natural gateway to and from one of the most important and extended system of rivers in the Southeast. Columbus, Ga., is at the head of navigation on the Chattahoochee and Albany, at the head of navigation on the Flint River. These rivers, joining, form the Apalachicola, flowing into the Gulf at Apalachicola. These commercially important waterways drain one of the most highly productive sections of Georgia and Alabama.

The hearing, under the auspices of the Chamber of Commerce, was attended by delegates from the interior sections of Georgia, Alabama and Florida. Realizing the importance of this improvement, there was submitted a voluminous report, with statistics, setting forth the commercial wealth of the section and the benefits to accrue with the improvement.

The project has attracted wide attention, and it is of national significance, in that it follows the route of the proposed Atlantic-Mississippi Canal through St. George Sound and Apalachicola River, where the Federal Government has already provided the physical connection between this river and St. Andrews Bay.

Production of Electrical Energy in 1920.

Our attention has been called to a typographical error in the MANUFACTURERS RECORD of March 31, wherein it was stated on page 99 that "the total production of electricity in public utility plants in 1920 was 439,000,000 kilowatt hours." The item should have read 43,900,000,000 kilowatt hours, which is the figure the United States Geological Survey gives as the output for the year 1920.

THE IRON AND STEEL SITUATION

Price Equalization Relieves Steel Trade.

Pittsburgh, Pa., April 25—[Special.]—There is a feeling of relief throughout the steel trade that steel prices are again equalized as between the United States Steel Corporation and the independents. There is what is coming to be called a "stabilized market," i. e., a schedule of prices in which buyers can have some confidence.

When the Steel Corporation and the independents have different prices the trade is always looking for the one party to reduce or the other to advance. Since late in 1919 the two have been at different prices nearly all the time. The equalization, as explained a week ago, came about by the independents advancing their prices on most commodities, pipe being the only important exception, while the corporation reduced its prices to the level the independents seemed willing to maintain.

Since prices have become stabilized, more news has come out as to the extreme price-cutting that has been done by independents. It is now related, for instance, that black sheets were sold at 35 cents, and that galvanized sheets were sold at 4 cents, when the open quotations, by independents, on single carloads had been 3.75 cents and 4.75 cents respectively. The futility of this method of trying to produce orders has now been made more than ever apparent to the mills. The common view, therefore, is that another period of price cutting by independents will not be lightly entered into.

A point in connection with the price stabilization and equalization is that the Chicago and other Western mills that were quoting f. o. b. mill prices have returned to the Pittsburgh basing prices.

As they were withdrawing their former and lower prices, the independents rounded up a considerable volume of business. The total of business thus secured was very fair and assures most of the independent mills a better operation for a time than they otherwise would have had. A 40 per cent operation for a few weeks is not improbable. Conditions afterwards will depend upon how business runs.

As to the Steel Corporation, the prospect is that it will receive a considerably larger volume of releases against suspended orders, and of fresh specifications against contracts, week by week, than would otherwise have been the case.

New prices as reported a week ago are: Bars, 2.10 cents; shapes, 2.20 cents; plants, 2.20 cents; blue annealed sheets, 3.10 cents; black sheets, 4 cents; galvanized sheets, 5 cents; tinplate, \$6.25; standard steel pipe, 62½ per cent basing discount; plain wire, 3 cents; wire nails, \$3.25. Since then additional prices have come out, hoops being set at 2.75 cents, against 3.05 cents in the Industrial Board Schedule, while light rails, 25 to 45-pound, are set at 2.45 cents, which is the Industrial Board price.

New prices on many manufactured steel products have come out, these prices being made chiefly by manufacturing consumers, rather than by steel mills, and the following may be named: Chain, 6.35 cents, base, for 1-inch proof coil chain; cold-finished steel bars, 3.10 cents, base; rivets, 3.50 cents for button-head structural, and 3.60 cents for cone-head boiler rivets; standard railroad spikes, 3.30 cents; small spikes, 1½, 7½, and 3½-inch, 3.65 cents; 5½-inch, 4.25 cents; boat and barge spikes, 3.85 cents; track bolts, 4.50 cents; cold-rolled strips, 5.50 cents.

The National Tube Co. has announced new prices on cold-finished seamless tubes, representing about \$20 a ton reduction from the Industrial Board prices, and on a discount from list basis as was the practice before the war-time price fixing, representative discounts being as follows: 1-inch, 56 per cent; 2 to 2½-inch, 17½ per cent; 4½ to 5-inch, 7½ per cent.

New prices are: Billets, \$37; slabs, \$38; sheet bars and small billets, \$39; forging billets, \$42; rods, \$48. Not much has been done at the new prices, except that the Republic Iron & Steel Co. reports sales of sheet bars totalling about 18,000 tons, at \$39, except for a small tonnage of light Bessemer bars, 6½-pound, which took extra prices, \$40 to \$42. A considerable tonnage of sheet bars was sold by some mills prior to the stabilization at \$35.

The unwillingness of workers at three or four coke plants to accept the reduced wage scale of April 1 has practically disappeared, and the plants that have orders are now working well. The latest sales of spot furnace coke are at \$3.30, this comparing

with the \$3.50 price obtaining in two good sized sales previously. The pig-iron market remains quiet and quotable at \$25 for Bessemer, foundry and malleable, and \$23 for basic, f. o. b., valley furnaces, with \$1.96 freight to Pittsburgh.

Birmingham Market Remains Quiet.

Birmingham, Ala., April 25—[Special.]—Pig-iron is moving in small lots from furnaces in the Birmingham district. The three furnaces of independent companies producing pig-iron in this district are making more iron than the market is requiring at present. The surplus stock of iron will hardly be reduced this month as was expected. But few orders of 500 or more tons have been handled this month, and in almost every instance the consumers have asked for immediate delivery. The Alabama Company is the only company reporting that deliveries are equal to the make, and the prospects are bright for continuation of that condition.

Quotations for pig-iron in the South are very weak, and orders for a little more than a car lot are asking concessions, and in a few instances are being accommodated. Iron has sold as low as \$23 here recently, while the bulk of the sales, car lots, has been at the \$25 per ton price, No. 2 foundry. The lagging pig-iron market extends to Northern furnaces as well as to this section. If the buying should continue in the North until July or August, it would be a difficult proposition after that for raw material supplies to be assembled in sufficient quantities to meet all demands, and the Southern furnace interests would come in for a happy solution of difficulties—shipment of pig-iron. The production in the Birmingham district can be materially increased on very short notice.

Local consumption has reached a considerably improved position as compared to three months ago, but still far from capacity melt. Steel mills operation in this district shows a little improvement for the week, the Fairfield Works of the Tennessee Coal, Iron & Railroad Co. putting the plate mill on double turn to catch up with a little rush business that was taken in, and in some other departments there was resumption of activities. The Gulf States Steel Co. is getting in some business and is increasing production a little.

The Gulf States will, May 2, start up the blast furnace and a large proportion of the open hearth furnaces in the steel plant, as well as some of the other departments. The rolling mills of the Tennessee Coal, Iron & Railroad Co. at Bessemer are in partial operation, with some orders for steel plate. Other industries employing pig-iron or steel in daily operation are looking forward for early improvement in business.

The coke market shows but little improvement, quotations being weak also, maximum price of foundry coke still being given out at \$7 per ton. But one company has bee-hive oven in operation. All by-product coke oven plants in Alabama are in operation save one. The Tennessee Coal, Iron & Railroad Co.'s big by-product plant at Fairfield is nearer full operation than the others. The sales of coke now being made are in the main in car lots as with the pig-iron trade.

Old material in the Southern territory is still very quiet, no scrap iron of consequence being sold and deliveries down to a minimum now. Quotations for scrap are weak. Pig-iron and old material quotations in the Birmingham district are as follows:

PIG-IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$23 to \$25; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$24.25 to \$26.25; iron of 2.75 to 3.25 per cent silicon, \$25 to \$27.50; iron of 3.25 to 3.75 per cent silicon, \$26.75 to \$28.75; iron of 3.75 to 4.25 per cent silicon, \$28 to \$30; charcoal iron, \$45.

OLD MATERIAL.

Old steel axles.....	\$15.00 to \$17.00
Old iron axles.....	23.00 to 24.00
Old steel rails.....	13.00 to 14.00
Heavy melting steel.....	13.00 to 14.00
No. 1 R. R. wrought.....	13.00 to 14.00
No. 1 cast.....	13.00 to 15.00
Stove plate.....	14.00 to 16.00
Old car wheels.....	16.00 to 17.00
Old tramcar wheels.....	15.00 to 15.50
Machine-shop turnings.....	6.50 to 7.50
Cast-iron borglins.....	6.50 to 7.50

GOOD ROADS AND STREETS

Awards \$255,000 Contract for Concrete Surfacing of Memphis-Marion Highway.

The last contract in connection with the construction of the highway from Memphis, Tenn., to Marion, Ark., has been awarded by the County Judge of Shelby county, Tennessee, and the Commissioners of Road Improvement District No. 9 to the Oliver Construction Co. of Little Rock, Ark., at \$255,200. The embankment and concrete bridges have already been completed, and the contract just awarded provides for the concrete surfacing of the roadway for its entire length of 8½ miles, beginning at the Mississippi River Levee, at the end of the viaduct which connects with the Harahan Bridge to Marion.

Preparations are being made to begin construction immediately under the supervision of the Morgan Engineering Co. of Memphis, the engineers for the district, and work will proceed simultaneously at two points on the highway, the one at the levee and the other three miles south of Marion. About 50 employees will be required to operate both outfits. It is expected to lay the first concrete about May 1, and to complete the entire surfacing by October 1.

The completion of this highway will be of considerable advantage to the city of Memphis and the adjacent district, as it will result in a great amount of vehicle traffic over the Harahan Bridge at all times, regardless of wet weather, thereby opening new trade territory from Arkansas to Memphis by affording local firms an opportunity to send salesmen for hurried business trips into Arkansas by automobile.

North Carolina Expenditure Over \$9,000,000 for Highway Construction.

North Carolina is steadily progressing with the construction of improved highways in all sections of the State and, according to a statement recently issued by the State Highway Commission, the amount of work actually under way at this time involves an expenditure of approximately \$9,750,000, including both State and Federal aid.

There are two bridge projects and 607 miles of highway, consisting of 560 miles of gravel and 107 miles of hard-surfacing, now in course of construction at a cost of \$9,727,317.21, while four projects—two bridges and two gravel roads, totaling 26 miles—are under contract, the estimated cost being \$68,725.33. Construction already completed comprises 36 projects—14 hard-surfaced and 21 gravel highways and 1 bridge—the expenditure involved amounting to \$2,463,920.

The schedule of work now in progress, and of that which has been completed, indicates that the mileage of gravel highways far exceeds that of the hard-surface type, the proportion being about 154 miles of gravel to 45 miles of hard-surfacing. All of the road-work undertaken by the State Highway Commission has been with Federal aid. A \$50,000,000 bond issue was previously authorized by the Legislature for a State system of improved highways.

Notes on Good Roads Construction.

A \$200,000 contract for road construction has been awarded by the Commissioners of Road District No. 2 of Cherokee county, Texas. About 40 miles of roads will be built.

Approximately \$200,000 is available for the construction of improved highways in Sumter county, Alabama. Bids for the building of 17½ miles of hard-surfaced road are being invited, and will be opened at the State Highway office, Montgomery, on May 18. W. S. Keller is the State highway engineer, Montgomery, and E. F. Allison of Livingston, Ala., is the president of the County Board of Revenue.

The Froebel-Briscoe Construction Co. of Muskogee, Okla., has been awarded a contract to construct 17 miles of gravelled roads in Wagoner county, Okla. The work includes 100,000 cubic yards of grading and 1700 cubic yards of concrete work. Approximately \$225,000 will be expended, construction being under the supervision of T. P. Clonts, engineer, Muskogee.

Bids Invited for Additional Missouri Highways.

Contracts will soon be awarded by the Missouri State Highway Board, Jefferson City, Mo., for the construction of 24.24 miles of highway in three counties, the total expenditure being estimated at \$251,927.

About 15 miles of State highway costing \$245,753 will be constructed in Butler county, Missouri, the work being designated as Federal-aid Project No. 59, Sections A and B. Section A will be 15.09 miles long and graveled to a width of 12 feet, while Section B will be .4 mile long and paved to a width of 16 feet with concrete. The former is estimated to cost \$224,294.47 and the latter \$21,458.83. The project includes the construction of three concrete bridges costing \$11,071.80. Bids will be received by the State Highway Board until April 30. M. S. Murray of Sikeston, Mo., is division engineer.

Another section of State highway, 3.91 miles in length, will be built in Pike county, Missouri, at a cost of \$21,161.60, and bids on this work are invited until May 5. M. J. Harrick of Macon, Mo., is the division engineer.

A gravel road, 4.84 miles in length, will also be constructed in Osage county, the surfacing to be 12 feet wide. The cost is estimated at \$6471, and bids will be received until May 2. H. D. Griffith of De Soto, Mo., is the division engineer.

Sale of \$2,700,000 Road Bonds Authorized.

In order to provide for the construction of the remainder of the 1921 road-building program for District No. 1 of Dallas county, Texas, the County Commissioners' Court has authorized the sale of \$2,700,000 of bonds. This is the second allotment to be sold of the \$6,500,000 issue voted in 1919, the first sale being of \$2,100,000. The remaining \$1,700,000 will be sold next year.

Sale proceeds of the bonds totaling \$2,700,000 will be expended for the construction of sections of the East Pike, Lancaster, Copell and Preston roads, the cost being estimated at \$2,477,831. Before inviting bids the record of the proceedings of the Commissioners' Court will be forwarded to the Attorney-General at Austin for approval.

To Construct 29 Miles of Virginia Highways.

Several types of paving material are specified by the Virginia State Highway Commission for use in the construction of State highways in five counties, and bids for the work will be received until May 3. The total length amounts to 29.41 miles, and is divided as follows:

Fluvanna county, 3.67 miles soil road and 1.05 miles bituminous macadam road; James City county, 3.17 miles concrete and bituminous concrete road; Wythe county, 9.04 miles water-bound macadam road; Lee county, 5 miles water-bound macadam road; Loudoun county, 7.48 miles bituminous macadam road.

Plans and specifications are on file with the Commission at Richmond.

\$568,000 Road Bond Issue Sold.

Oklmulgee, Okla., April 20—[Special]—An issue of \$568,000 of Okmulgee county road bonds was sold here yesterday by the Board of County Commissioners to the American State and Central National Banks of Okmulgee, each bank taking one-half the bonds. The price paid was 93 cents on the dollar, of par value and accrued interest. The bonds bear 5 per cent interest, and mature at the rate of \$32,000 annually until the issue is retired. This issue was approved by the voters in 1916, but was not sold on account of the war and market conditions. The county expects to secure a like amount of Federal aid and to begin the construction of \$1,000,000 worth of hard-surfaced highways about June 1.

Much activity was shown by club girls of Southwest Mississippi during 1920, according to a report filed at Jackson by Mrs. M. S. Dobbs, State demonstration agent, who estimated that \$1,500,000 worth of canned products was turned out by the various county and community clubs working in collaboration with the home demonstration agents of the State.

to \$17.00
to 24.00
to 14.00
to 14.00
to 14.00
to 15.00
to 16.00
to 17.00
to 15.50
to 7.50
to 7.50

RAILROADS

Financial and Construction Features of Louisville & Nashville System's Annual Report.

The annual report of the Louisville & Nashville Railroad Co. for 1920 says that under the Adamson Act and Federal operation the system's actual labor payrolls increased \$51,216,022, or from \$24,427,677 in 1916 to \$75,643,699 in 1920, or the equivalent of nearly 210 per cent, and that during the same period all other expenses increased \$30,239,643, or 172 per cent. Of these other expenses, \$19,740,439 are estimated as increases in cost of materials and supplies, including coal, which increased more than \$9,790,000, and crossties more than \$2,140,000.

As a result of shrinkage of business since September 1, 1920, the company has seized every opportunity to make savings in the cost of materials and supplies, and wherever possible, train service is being curtailed. Although forces have been reduced, there are still 5700 more men employed than there were in 1916.

Concerning improvements and new construction ordered several months ago, the report says the construction of automatic block signals between Maplewood and Brentwood, Tenn., via the Radnor Yard, was completed January 26, 1921, making a total of 734½ miles of line so protected. The construction of about 5½ miles of second track between Arkle and Bailey's, Ky., on the Cumberland Valley Division, was begun last September and is in progress. This new construction is on a .65 per cent grade, opposed to northbound traffic, and it also includes lowering grade on the existing track, and making an open cut to replace the Bradford Gap tunnel, besides the revision of the southbound main track at Emmanuel and Bailey's Switch. This work is a continuation of the second track completed two years ago between Corbin and Arkle.

Grading for the construction of an assembly yard and mechanical facilities at Loyal, Ky., on the same division, began in November last, and it is expected that this improvement will be completed during the current year. Work is also in progress on the construction of a second track for about 6 miles between Ravenna and Pryse, Ky., on the Eastern Kentucky Division, the new work being along and adjacent to the existing main line.

Construction of a storage yard at Crawford, Ky., also on the Eastern Kentucky Division, was started last July, and is expected to be completed this year. The Carr's Fork Branch, which was built up Carr's Fork to Vicco, Ky., about 6½ miles, early last year, is being extended about half a mile to the mouth of Yellow Creek.

The financial statement presented in the report is published on another page of this issue.

\$44,000,000 Increase of Rock Island System's Payrolls From Government Control.

"The startling feature of the present situation," says President J. E. Gorman in the forty-first annual report to the stockholders of the Chicago, Rock Island & Pacific Railway, "is that, after the Government has had your property for nearly three years, it comes back to you saddled with an increase in payrolls of approximately \$44,000,000 per annum over the payrolls December 31, 1917, when the property was taken over. Your company must now pay in wages and salaries \$44,000,000 a year more than it paid in 1917. This is about 50 per cent on the outstanding common stock."

The number of employees and the monthly payroll at three important dates were as follows: December 31, 1917 (beginning of Federal control), 40,326 employees, \$3,524,052.43 monthly payroll; February 29, 1920 (end of Federal control), 45,950 employees, \$5,850,869.19 monthly payroll; February 28, 1921 (end of first year of private operation), 34,531 employees, \$5,132,813.52 monthly payroll.

Attention is directed to comparison of the last with the first. For instance, there were on February 28 of this year 5795 less employees, but the monthly payroll had increased from \$3,524,052.42 for December, 1917, a 31-day month, to \$5,132,813.52 for February, 1921, a 28-day month. The total payroll for 1917 was \$40,195,210; the total for 1920, exclusive of back time accruing in preceding years, was \$84,315,395.

"The Director-General," remarks President Gorman, "granted

many increases in pay, not only by directly increasing the rates of pay, but by putting into effect rules and regulations affecting the conditions of employment which increase the employees' compensation. * * *

"In settlement of a dispute arising between the Director-General and his employees, the Labor Board in July, 1920, granted an increase involving practically all of the employees in the United States, which added approximately \$15,000,000 a year to the payrolls of this company. The rules and working conditions prescribed in the so-called national agreements and wage orders meanwhile remain in force, although the board is now considering them.

"We have pointed out the financial magnitude of this matter. A part of the greatly increased burden results directly from the increases in wages, which were necessary, of course, to meet the increased cost of living, and the general increase of wages affecting all employments. A very substantial part of this increased burden upon the railroads, however, comes from the rules affecting the working conditions and from the reclassification of employees pursuant to the national agreement. In addition, we believe there is an indirect burden resulting from the necessary impairment of morale consequent upon such conditions. * * *

"If the present operating costs are continued, we doubt whether it is possible, even with the resumption of traffic to its normal volume and at the present high rates, to produce a net income such as contemplated by the Transportation Act; for as the traffic increases the expenses increase. We regard it as essential, therefore, that the cost of transportation be substantially reduced."

It is gratifying to see President Gorman reporting that during the year 1920 there were 221 new industries, employing approximately 6000 men and originating in normal times about 5000 carloads of freight per annum, located on the company's lines.

The total railway operating revenue of the system for 1920 was \$141,946,972; increase as compared with 1919, \$25,322,289, or 21.71 per cent; total railway operating expenses, \$133,535,832; increase, \$32,038,098, or 31.57 per cent; net revenue from railway operations, \$8,411,140; decrease, \$6,715,809, or 44.40 per cent. The deficit on the entire operations for the year was \$10,793,964.

Extension of Time for Filing Overcharge Claims.

The MANUFACTURERS RECORD is informed by the Natalbany Lumber Co. of Hammond, La., that the United States Railroad Administration has advised that legislation looking to the extension for two years of the time for filing overcharge claims arising out of operations during Federal control has been suggested; that such legislation would afford relief, and that it would not be opposed by the Railroad Administration.

This statement is particularly interesting and important, following as it does, the recent announcement by the Interstate Commerce Commission and the Railroad Administration that straight overcharge claims are included in the statute of limitations fixed by Section 206 of the Transportation Act, which act fixes the time for filing claims as of February 28, 1921.

The lumber company points out that "No doubt there are thousands of shippers affected by the above referred to decision," and we publish these facts that such of our readers as are interested may advise with their representatives in Congress with a view to the enactment of remedial legislation looking to the extension of time for filing such claims, and which legislation the Railroad Administration has announced it will not oppose.

Norfolk & Western Financing.

The Norfolk & Western Railway Co. has applied to the Interstate Commerce Commission for authority to issue and sell \$2,004,000 of securities as follows: \$269,000 of 4 per cent convertible 10-20-year gold bonds; \$1,213,000 of 4½ per cent convertible 10-25-year gold bonds, and \$522,000 of 6 per cent convertible 10-year gold bonds, the purpose being to partly reimburse the company's treasury for capital expenditures which have been made, aggregating \$2,019,686.47, according to a report from Roanoke, Va., where the company's headquarters are located. It is proposed to sell the bonds for not less than par and accrued interest, less not over 3 per cent commission. The expenditures were for heavier rails, improved ballast, construction of sidings and spurs, purchase of shop machinery and tools and electric power transmission.

LUMBER AND BUILDING MATERIALS

Southern Pine Sales Record 3550 Cars Containing 76,041,000 Feet for Week.

New Orleans, La., April 19—[Special.]—All sales records over a period of more than 12 months were shattered in the sale of lumber by mills of the Southern Pine Association, as indicated by the summarized report from 133 mills for the week ended April 15, when orders were received for a total of 3550 cars containing 76,041,000 feet, or an average of 571,737 feet per mill. This exceeds the most recent high record of the week ended April 1, when 134 mills reported orders received for the week amounting to 3135 cars of 61,869,615 feet, making an average per mill of 506,490 feet. The increase in "orders on hand" during the week amounted to 7.14 per cent.

The production for the week was 59,299,055 feet, and the shipments made amounted to 61,925,220 feet, being 2,626,165 feet above production, or 4.43 per cent. The orders, however, totaled 28.23 per cent above production, and were 22.80 per cent above shipments for the week. The actual production was 32.53 per cent below normal, and shipments were 29.54 per cent. below normal. Orders were but 13.48 per cent below normal production.

The report for the week is as follows:

	Cars.	Feet.
Orders on hand beginning of week.....	9,225	197,599,500
Orders received during the week.....	3,550	76,041,000
Total	12,775	273,640,500
Shipments during the week.....	2,891	61,925,220
Orders on hand end of week.....	9,884	211,715,280

Lumbermen Take Steps to Create Desire for Houses and Stimulate Buying and Building.

Houston, Tex., April 21—[Special.]—The principal outcome of the thirty-fifth annual convention of the Texas Lumbermen's Association was the plan to acquaint the public of the lower cost of building materials, and to create a greater desire on the part of individuals to be home-owners.

Advertising their wares was the principal recommendation for expansion, and next in importance was a recommendation calling for closer co-operation between all agencies engaged in construction work. Support of building and loan associations, making it possible for the man of small means to own his home, was also suggested, and it was highly commended as a means of community development. As most organizations are formed, many persons subscribe, being eligible after a given length of time to participate in the benefits. If the organization is given proper support, the entire community is then constantly piling up part of its earnings to guarantee an adequate supply of houses as the community expands.

To augment building sales, educational campaigns to acquaint the general public with modern home construction were proposed. Sales campaigns and special literature were generally admitted to be the best methods of accomplishing this purpose. Monthly campaigns among farmers to place their requirements were suggested.

Forest Conservation Urged by President Harding.

President Harding has issued a proclamation setting apart the week of May 22-28 as a time for the study of forest fires and a consideration of preventive measures through educational and instructive exercises as will bring before the public the serious effects of the unnecessary waste through forest fires and the need for individual and collective efforts in conserving the forest resources of the nation. Lumbermen, lumber and building material dealers, associations and organizations of varied kinds and prominent business men throughout the country will unite in an endeavor to bring the subject forcefully before the public with a view to getting their support and sympathy.

The President's proclamation is as follows:

"Whereas the destruction by forest fires in the United States involves an annual loss of approximately \$20,000,000 and the devastation of approximately 12,500,000 acres of timber land and other natural resources; and

"Whereas the present deplorably large area of nonproductive land is being greatly increased by 33,000 or more forest fires which occur each year; and

"Whereas the menace of a future timber shortage threatens to become a present economic fact seriously affecting our social and industrial welfare; and

"Whereas a large percentage of the forest fires causing the annual waste of natural resources may be prevented by increasing care and vigilance on the part of citizens:

"Therefore, I, Warren G. Harding, President of the United States, do urge upon the Governors of the various States to designate and set apart the week of May 22-28, 1921, as Forest Protection Week, and to request all citizens of their States to plan for that week such educational and instructive exercises as shall bring before the people the serious and unhappy effects of the present unnecessary waste by forest fires, and the need of their individual and collective efforts in conserving the natural resources of America."

Analysis of Inspection of Southern Pine Lumber During 1920.

New Orleans, La., April 28—[Special.]—The effect of the regular inspections made by the Southern Pine Association at the mills of its subscribers is seen by an analysis of the inspections made during 1920 of stock shipped from the mills of Southern Pine manufacturers, on which claims had been made by purchasers for allowances for undergrades.

Of a total of 22,586,322 feet shipped by subscribing mills, inspected on claims only 2,718,304 feet, or 12.03 per cent was found to be below the grade supposed to have been shipped, while out of a total of 16,286,540 feet shipped by nonsubscribers, 5,360,121 feet, or 32.91 per cent was off grade.

The big difference in the percentage of off-grade stock shipped by manufacturers not subscribers to the Association service, as compared with that shipped by subscribers, is attributed not only to the fact that the lumber of the Association mills is graded strictly in accordance with the standard specifications promulgated by the Southern Pine Association, but to the fact that the graders at the mills are personally instructed in proper methods of grading by experienced men in the employ of the Association.

An interesting story to all lumber buyers should be conveyed by the following statement showing the result of claim inspections made during 1920:

	Subscribers.	Non-Subscribers.
No. of claims inspected.....	820	628
No. of cars inspected.....	959	878
Total amount invoiced.....	22,586,322 ft.	16,286,540 ft.
Total amount below grade.....	2,718,304 ft.	5,360,121 ft.
Per cent below grade.....	12.03	32.91

Increase in Export Movement of Lumber.

Mobile, Ala., April 21—[Special.]—A decided increase in the movement of export lumber has been noted during the past few days, and in shipping circles it is believed that this line of business will become very active in a short time. The schooner John Francis sailed recently for San Juan, Porto Rico, and nearby ports with 235,000 feet of lumber, and loading began about the same time on the schooners E. A. Sabean and Melbourne P. Smith, the former for Vera Cruz and the latter for the north side of Cuba.

Plan Nation-Wide Drive to Revive Building.

New York, April 22—[Special.]—A nation-wide drive to restore confidence in the building and construction industry of the country has been launched by the executive board of the National Congress of the Building Construction Industry. It is proposed to make a careful study of labor and materials conditions. Efforts will be made to correct the causes of decline in the supply and quality of workers in the industry, and to determine the needs of the industry in raw materials and manufactured products. Other important problems will be considered.

Lumber and Building Materials Notes.

In Birmingham, Ala., building permits issued in March had a valuation of \$700,106 and numbered 536, while during the same month in 1920 there were issued only 404 permits, with a valuation of \$444,068, showing an increase of 58 per cent.

Lanning & Coe, contractors of Greensboro, N. C., report that there is now a greater demand for new houses than they have experienced for many months. Indications are, they say, that more new houses will be constructed this year than during any previous 12 months' period.

Work has commenced on a number of new houses in Norfolk, Va., more than half of the permits issued in March being for residences, and there are indications that during April residence construction will predominate. In one week 12 permits were issued for residences to cost \$57,000.

The State Convention of Homestead Association representatives will be held beginning April 28 at the St. Charles Hotel, New Orleans, La. Prominent men from various parts of the country and all parts of the State will attend, and important subjects will be discussed. The sessions will close on Saturday.

The City Council of Clarksburg, W. Va., has issued since the first of the year building permits with a valuation approaching \$500,000. This amount is nearly double that of the first quarter of last year. The majority of permits is for residence construction, there being an acute shortage of dwellings in the section.

Building activity is getting under way early in Radford, Va., the majority of building permits being issued chiefly for new dwellings and remodeling of present houses. Several important business houses are planned. In addition to this work, the Norfolk & Western Railway is spending several hundred thousand dollars in local improvements.

Building activity in the vicinity of Tuscaloosa, Ala., is above normal; there has been some increase in orders for lumber, and prices have stiffened slightly. Most of the orders received, however, are for immediate shipment. Wages of millworkers and carpenters have been reduced. Production remains low, and stocks are about 50 per cent less than several months ago.

Evansville (Ind.) brick manufacturers recently reduced the price of brick 25 per cent, with the possible result that other manufacturers in the same section will also reduce their prices, and thus stimulate building, especially in the vicinity of Henderson, Ky. It is said that the Chamber of Commerce at Henderson has a plan to erect 35 modern houses of four, five and six rooms.

To enable work to proceed on a number of large building projects in the vicinity of Hattiesburg, Miss., carpenters and bricklayers have voluntarily agreed to a reduction in wages. The bricklayers' wages have been reduced from 95 to 85 cents an hour, and carpenters from 75 cents to 60 cents an hour. Other men associated with the building trades are expected to take similar action.

Members of the Contractors and Dealers' Association of Mobile, Ala., plan a "home-building" campaign as a result of the recent reduction in cost of materials and labor. Estimates will be prepared showing the difference in cost of today's prices over those of a year ago for many kinds and types of dwellings. A recent investigation shows that the prices of materials have been reduced approximately as follows: Lumber, 55 per cent; bricks, 39 per cent; roofing, 34 per cent; factory work, 25 per cent; skilled labor, 20 per cent; unskilled labor, 30 per cent.

Export business continues good at Orange, Tex., about 90 per cent of the lumber being shipped to Tampico, Mexico. Recently two cargoes, totaling 1,053,000 feet, cleared from the port in a week for Tampico, while two cargoes of 500,000 feet each were being loaded, and additional vessels are booked for future cargoes. Plans are being considered for greatly increasing the wharf and dock facilities in view of the increased business. An additional warehouse, improved railroad trackage and an extension of the docks to provide for loading of five vessels instead of three are contemplated improvements.

Lumbermen's Association of Texas Elects.

Houston, Tex., April 21—[Special.]—The thirty-fifth annual convention of the Lumbermen's Association of Texas closed last week, after the election of officers and the selection of Fort Worth as the next convention city. The officers for the ensuing year are: E. P. Hunter, president; W. S. Howell, first vice-president; J. C. Dionne, secretary, and Thomas W. Blake, treasurer.

TEXTILE

To Install 200 Additional Looms.

The installation of 200 additional looms is planned by the management of the Alexander City Cotton Mills of Alexander City, Ala., now under the management of B. B. Comer and associates. Additional facilities provided at the plant have troubled its former capacity, and many improvements have also been made at the mill village, these including water-works and electric-light system. The mill now has 13,000 spindles and 304 looms, manufacturing four-leaf twills for shoe linings.

Knitting Mill to Resume Operations.

Operations are to be resumed this week by the Chesapeake Knitting Mills of Norfolk, Va., controlled by William Sloane & Co. About 350 operatives will be employed.

The Elizabeth Knitting Mills of South Norfolk, and the Tide-water Knitting Mills of Portsmouth, both of which are controlled by William Sloane & Co., are expected to resume within a short time. The mills were closed about the end of last year.

Contract Awarded for Dyeing Plant.

The Judson Mills of Greenville, S. C., have awarded the contract for the erection of the dyehouse, referred to last week in these columns, to the Gallivan Building Co. of Greenville. The building will cost \$10,000 and the machinery \$10,000 additional. J. E. Sirrine & Co. of Greenville are the engineers.

Commendations, Kicks and Comments

A Forecaster Also.

JOHN W. JACKSON, postmaster, Palmetto, Fla.—I am enclosing herewith \$6.50 for another year's subscription to the MANUFACTURERS RECORD. You should add the additional title of Forecast to your paper, and have it read Record and Forecast.

Has Not the Fawning Hinge.

H. M. KENDALL, Richmond, Va.—For boiled-down, compressed, much-in-small-space common sense, naught that the MANUFACTURERS RECORD has published this year approaches "Unlock the Door," page 74, issue of March 31. How good it is that one publication, at least, has not the "fawning hinge!" May the Lord continue His approval of your course of action!

A Banker's View As to Drastic Deflation.

E. F. GOLDSMITH, Cashier The Bank of Atmore, Atmore, Ala.—We are enclosing herewith our check for \$6.50 for renewal of subscription to your most valuable paper.

While we do not agree with you in every case we DO believe you are right in most instances, especially as regards the cause of the drastic deflation of credits we are passing through. Go after them, and then keep on going!

The Public Should Be Educated.

J. H. THORNTON, Keith, Simmons & Co., Nashville, Tenn.—The article you published under the caption of "The Trade Slump: Its Cause and Cure," in your issue of March 3, is the most enlightening discussion of our business depression that we have read. The public should be educated along these lines, as public opinion is the only thing that can overcome this evil. We suggest that you print a quantity of this article in pamphlet form for distribution to Congressmen and business men.

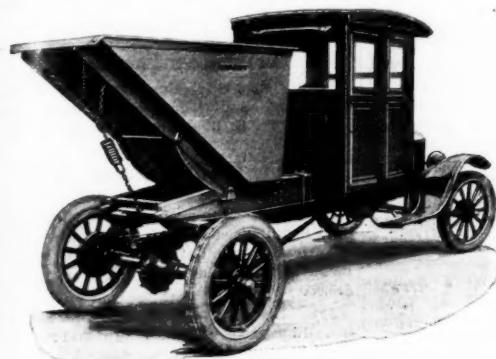
Would Have Every Man Read Every Issue.

O. L. JOYNER, leaf tobaccoist, general farming, Greenville, N. C.—Enclosed find check for \$6.50 for which please send me the Record, beginning this week. I have been buying it from the news stands, but had so much trouble getting the last few issues, as they were sold out before I could secure one, decided I did not want to miss a single issue. Would to God every man in our country could read every issue of the MANUFACTURERS RECORD. You are doing a great public service. Strength to your arm and courage to your determination.

MECHANICAL

End-Dump Truck Bodies.

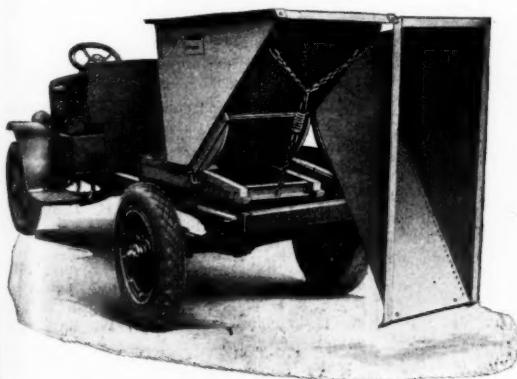
Economy and efficiency are conspicuous characteristics of the end-dump truck bodies of gravity type here displayed and described. They do away with all gears or mechanical lifting devices, and have been widely adopted by building contractors, road constructors and sand and stone companies. This success is due, it is remarked, not only because of a large saving in first cost, but rather on account of their extreme simplicity, coupled with the fact that they can be dumped by the operator in two seconds without it being necessary for him to leave the seat, and furthermore, they possess long wearing qualities.



SINGLE BODY ON LIGHT TRUCK.

For general contracting work a single body of one yard capacity is used on ordinary light trucks, the total investment necessary being but little more than the cost of a good team, yet the motor truck will cover 90 miles in a day, while a team would cover but a comparatively small fraction of that distance, thus saving both time and money.

For paving and other heavy work the dual type, consisting of two bodies, one alongside of the other, is used, and on central proportioning plants the body is selected according to the size of the concrete mixer, and two charges are carried on one truck. Thus,



DOUBLE BODY ON A LARGER TRUCK.

If the mixer is of the two-bag size, two bodies, each of one-half yard capacity, are employed; if it is a four-bag mixer, two one-yard bodies on a two or three-ton truck are used, the end-dump feature permitting a direct charge into the hopper of the mixer. If there is a central mixing plant, bodies of one-yard capacity in both single and dual types are used for hauling concrete directly from the stationary mixer to the job. The body, being water-tight and dumping at a very steep angle of more than 60 degrees, is easy to unload.

Concerning this latter method of using the bodies, it is noted that the State Highway Department of Illinois allows a haul up $\frac{1}{2}$ miles in distance and finds no separating tendency on stiff

concrete now used. In fact, it is further observed, the central mixing plant idea has proved so successful that more than 75 big plants are being used on work this year in Illinois, where it is no longer permissible to dump materials on the subgrade.

These truck bodies are manufactured entirely of steel plate, structural and steel forgings, and it is asserted there is absolutely nothing to get out of order about them. They possess an exclusive steel safety arm arrangement, which dispenses with studs in track, slipping of the body or danger of its running over the ends of the track.

The manufacturers are the Mandt Body Co., Keokuk, Iowa, who have issued bulletins describing and picturing the trucks in detail.

FOREIGN NEEDS

[The MANUFACTURERS RECORD receives many letters from abroad asking information about American goods, and others, from men who wish to represent American houses. Without assuming any responsibility for these concerns, we publish a summary of the foreign letters of inquiry from week to week.]

Shoes.

CARLO COLLEVATI, Via Fieschi N. 14-2, Genoa, Italy.—We desire to import shoes into Italy of such styles as are suitable for our trade.

Paper, Stationery, Printing Presses, Inks, Etc.

SADHAN & CO., 100 Upper Circular Road, Calcutta, India.—We are interested in paper (all descriptions), stationery, printing ink, printing and bookbinding machines, and shall be very pleased to be introduced to respective manufacturers.

Goods for Engineers, Collieries, Shipyards, Etc.

CROMIL ENGINEERING CO., LTD., Milburn House, Newcastle-on-Tyne, England.—Mr. G. E. Taylor, a director of this company, is visiting the United States on a business trip, arriving about the 20th of March, and will be glad to hear from manufacturers wishing to develop business with Great Britain. We have for years been selling the products of the Acheson Graphite Co., Niagara Falls, N. Y., U. S. A.; Leavitt Machine Co., Orange, Mass., U. S. A.; Worthington Ingeco engines and pumps, and we are disposed to consider proposals concerning goods which would be of interest to engineers, collieries, shipyards, etc. Correspondence addressed to Mr. Taylor of Cromil Engineering Co., Ltd., care of Messrs. Caldwell & Co., 50 Broad street, New York, U. S. A., will receive careful attention.

Photo-Medallion Machines, Etc.

K. I. GVALANI & CO., Postoffice Box 54, Karachi, India.—We shall be thankful to receive catalogs, illustrations and samples, if possible, together with prices, discounts, terms of trade and other necessary particulars, trade-marks, etc., for the following as early as possible: (1) Photo-medallion making machine complete, with dies in sets of 3 for each oval and round shapes of cabinet, quarter, 70 lines, 60 lines, 50 lines, 40 or 30 lines, 20 lines sizes respectively, including a roller or rolling machine for rolling celluloid over photos to cover them with celluloid; (2) Medallion parts for front and back sides of medallions, in mount bases and backs, of double tin or other metal usually used, of all above sizes; cabinet and quarter size backs fitted with wire holders to serve as stands, 70 to 30 lines sizes, fitted with safety pins, and 30 and 20 lines sizes, fitted with hooks like hooks of coat or waist buttons. All printed matter, catalogs, etc., should be sent in duplicate.

Chemicals, Tanning Materials, Bone Flour, Etc.

HUBER & DOTTI, via Alberto da Giusano, 21, Milan, Italy.—We specialize and are interested in the following: Chemicals of every description; tanning materials; bone flour or meal; petroleum products, such as paraffine, etc.; asphalt for paint and varnish purposes; glucose; corn starch. During war times exporters of your country were able to do a large business with Italy in these products, but now as competition is keener, in our opinion only manufacturers (or some very large dealer well specialized in the line) will be successful in doing export business. The only way to facilitate business is the following: Prices to be stated in American currency e. i. f. Italian ports; payment cash net in exchange for shipping documents through reliable Italian banks. These terms are granted by manufacturers and exporters of other countries. We represent, on a commission basis, several foreign houses, and would be very glad to put our services at the disposal of reliable manufacturers of your country.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representative's reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Fla., De Land.—Volusia County will erect steel highway drawbridge across intercoastal canal at Smith's Creek bridge; bids until May 5; Samuel D. Jordan, Clk. County Commissioners. (See Machinery Wanted—Bridge Construction.)

Fla., Jacksonville.—Duval County will construct wooden bridge over McGirt's Creek on New River-Maxville road; bids until May 2; Chas. A. Clark, Chrmn. County Commsr. Recently noted. (See Machinery Wanted—Bridge Construction.)

La., Alexandria.—Rapides Parish will grade, bridge and construct culverts on Section B of LeCompte-Red River road; bids until May 10; J. F. Ball, Prest. Police Jury. (See Machinery Wanted—Bridge Construction.)

Okla., Canadian.—State Highway Dept., Oklahoma City, Okla., let contract to Froebel-Briscoe Construction Co., Muskogee, Okla., at \$50,000 for 360-ft. bridge; steel; B. E. Clark, State Highway Commr., Oklahoma City. (Lately noted under McAlester, Okla.)

Va., Hanover.—Virginia State Highway Comsnn., 116 S. 3d St., Richmond, Va., will build 324-ft. steel bridge over Pamunkey River; bids until Apr. 25; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Bridge Construction.)

Canning and Packing Plants.

Ga., Darien.—Georgia Canners, Brunswick, Ga., organized with A. D. Strohbar, Prest., Savannah, Ga.; C. A. Taylor, Treas.-Mgr., Brunswick; will erect 150x50-ft., 60x40-ft. and 40x30-ft. ordinary construction buildings; has machinery to can shrimp, oysters, vegetables, etc.; J. P. Johnson, Constr. Engr., Darien. (Lately noted inceptd.)

Tex., Brazoria County.—Gulf Coast Orchards Syndicate, capital \$50,000, organized with E. R. Harang, Prest.; H. C. Harang, Secy.; Jacob Linderman, Treas.; all Brazoria, Tex.; will erect preserving plant for figs. (See Land Developments.)

W. Va., Huntington.—Fessenmeier Packing Co., M. M. Fessenmeier, Prest., Cumberland, Md., will improve plant; install additional machinery, operated under 1500 electric H. P.; erect 3000-ton reserve storage plant. Lately noted. (See Ice and Cold-storage plants.)

Clayworking Plants.

Fla., Tampa—Clay Products.—Hull & Hull, capital \$50,000, inceptd. with A. G. Runyon, Prest.; Randell Bell, Secy.-Treas.; both Pensacola, Fla.

Md., Mount Savage.—Mount Savage Fire Brick Co. let contract to Golin Gerlach, Frostburg, Md., to erect plant addition and 90x50-ft. power-house.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Coal Mines and Coke Ovens.

Ky., Chavies.—Johnson-Hogg Coal Co. will expend \$1,000,000 on plant improvements, including erection of double tipple.

Va., Pulaski.—Virginia Anthracite Coal Corp., F. J. Hargrave, Secy., increased capital from \$1,500,000 to \$5,000,000; leased about 1200 acres; present daily output 400 tons, contemplate 1000 tons; John G. Hayes, Const. Engr. Lately noted. (See Machinery Wanted—Ventilating [Coal Mine] Equipment; Preparation Plant.)

W. Va., Beckley.—Beckley Coal & Supply Co., capital \$50,000, inceptd. by W. C. Thurman, Beckley; Fred Richmond, Pemberton, W. Va.; J. M. Bowman, Sprague, W. Va.

W. Va., Fairmont.—Consolidation Coal Co., Continental Bldg., Baltimore, Md., will erect coal tipple at Mine 63, old No. 8.

W. Va., Huntington.—Southern Coal & Timber Corp., capital \$50,000, inceptd. by J. C. Myers, S. H. Bowman, W. A. Williams.

Drainage Systems.

Ga., Macon.—Alcovy River Drainage Dist. No. 2 Commsr. will construct ditch consisting of 13 mi. on Alcovy River, $\frac{1}{2}$ mi. on Flat Creek, 4 $\frac{1}{2}$ mi. on Mountain Creek, 1 $\frac{1}{2}$ mi. Little Mountain Creek; total excavation 1,098,335 cu. yds.; bids until May 4; W. D. Alexander, Engr., Charlotte, N. C. (See Machinery Wanted—Drainage.)

Ga., Marietta.—Ollies Creek Drainage Dist. No. 6, Cobb County Commsr., 9 mi. drainage ditch; bids until Apr. 29; Will B. Alexander, Engr., 207 Monroe Rd., Charlotte, N. C. (See Machinery Wanted—Drainage.)

Mo., Stanberry.—Stanberry Drainage Dist. C. L. Moseley, Prest., construct main ditch, laterals and dam; total excavation 286,200 cu. yds.; bids until Apr. 26; Clark E. Jacoby Engineering Co., Engr., 527 Shukert Bldg., Kansas City, Mo. (See Machinery Wanted—Drainage, etc.)

Electric Plants.

Ga., Bibb City (P. O. Columbus).—Voted \$30,000 electric lighting improvement bonds. Address The Mayor. (Lately noted to vote.)

Mo., Higginsville.—Sold \$12,000 electric light and water bonds. Address The Mayor.

Okla., Kaw City.—Will vote May 6 on \$35,000 electric and water systems extension bonds; construct building; install electrical unit; increase plant development 200 H. P.; purchase additional switchboard; extend street-lighting system and electric service to 348 additional residences. Address The Mayor. (Lately noted contemplated.)

Tenn., Martin.—Sold \$100,000 light and water improvement bonds; bids on construction in about 6 weeks; Frank L. Wilcox, Engr., Chemical Bldg., St. Louis, Mo.

Tex., Ballinger.—Voted \$65,000 bonds to construct light and power plant. Address The Mayor. (Lately noted to vote.)

W. Va., Charleston.—Navy Dept. Bureau Yards & Docks, Washington, D. C., plans installing electric-distributing system (Spec. No. 4418).

W. Va., Romney.—Farmers' Electric Co., capital \$25,000, inceptd. by J. W. Shull, Jas. O. Blue and J. S. O'Hara.

Fertilizer Factories.

Tenn., Nashville.—Farmers' Mutual Phosphate Co., capital \$600,000, inceptd. by Addie Warden, W. R. Roach and John M. Petty.

Flour, Feed and Meal Mills.

Ala., Opelika.—J. L. Satterwhite, S. 9th St. and Ave. B, will erect ordinary brick building; install grist-mill machinery, cleaner and electric motors; daily output 500 bu. corn meal. (Lately noted burned at loss of \$15,000.)

Ark., Big Flat.—W. J. Avey & Son plan installing grist mill in South Middle Creek.

Mo., East Bottoms.—Quisenberry Feed Plant Co. let contract to Lehrach Engineering Co., 412 American Bank Bldg., to remodel feed plant.

Mo., Rushville.—Rushville Elevator Co. will erect 20,000-bu. grain elevator; reinforced concrete; Jones-Hettlesater Construction Co., Engr.-Contr., 706 Mutual Bldg., Kansas City, Mo.

Tex., Vernon.—Kell Milling Co. increased capital from \$50,000 to \$500,000.

Foundry and Machine Plants.

Ala., Birmingham—Foundry.—Johnson-Thompson Foundry Co., North 26th St., will erect \$20,000 plant addition.

Ky., Bellevue—Pumps.—Rosen Pump Mfg. Co., capital \$10,000, inceptd. by Victor and Emma Rosenhagen, E. E. Kumler.

Md., Baltimore—Electrical Appliances.—Acme Electric Co., 223 N. Calvert St., capital \$10,000, inceptd. by Clarence D. Boyle, Louis Storm, Louise Malloy; mfre. electric motors, fixtures and appliances.

Okla., Pawhuska—Steel.—C. H. Loop Steel Mfg. Co., capital \$100,000, inceptd. by C. K. Loop, H. V. Baker, S. C. Burnette.

W. Va., Kenova—Mine Cars.—Kenova Mine Car Co., capital \$225,000, inceptd. by W. T. Green, R. L. Walker, both Charleston, W. Va.; W. H. Taylor, Huntington, W. Va.; mfre. mining equipment.

W. Va., Logan—Repair Shop, etc.—Logan Machine & Electric Co., capital \$25,000, inceptd. by S. S. and C. F. Smith, H. E. Steele.

Gas and Oil Enterprises.

Ark., Fort Smith.—Unit Oil Co., Raney Whaley, Secy.-Treas., increased capital from \$10,000 to \$100,000. (Lately noted inceptd.)

Ark., Van Buren—Refinery.—Fording Refinery Co., Van Buren and Fort Smith, Ark., capital \$250,000, inceptd. with E. F. Blanchard, Prest.; John H. Vaughn, Secy.; both Fort Smith, Ark.; C. C. Powers, Treas., Tulsa, Okla.; purchased 17-acre site; plans erecting

refinery with daily capacity 500 bbls. gasoline; contract let for mech.; install retorts, absorbers and engines.

Fla., St. Petersburg.—Voted \$175,000 bonds for 1,000,000 cu. ft. holder at gas plant. Address The Mayor. (Lately noted to vote.)

Ky., Lexington.—Oil Products Co., capital \$10,000, inceptd. by A. V. Smith, Earla Adams.

Okla., Bartlesville.—Ever Par Oil & Gas Co., capital \$500,000, inceptd. by Marlan and M. D. Parr, A. H. Everly.

Okla., Duncan.—Oil & Gas Corp., capital \$200,000, inceptd. by E. W. Hall, Duncan; Porter Oakes, J. L. Hill, both Wichita Falls, Texas.

Okla., Muskogee.—Pea Ridge Oil Co., capital \$50,000, inceptd. by Vin Truman, J. W. Hale and J. W. Porter.

Okla., Nowata—Gasoline.—Woodshaw Gasoline Co., capital \$10,000, inceptd. by G. E. and Frank Woodward, Albert Crenshaw.

Okla., Pawhuska.—Corona Oil Co. increased capital from \$1,000,000 to \$4,000,000.

Okla., Tulsa.—Maurice Oil Corp., capital \$60,000, inceptd. by E. F. Rogers, M. M. Robertson; both Tulsa; Maurice R. Smith, Kansas City, Mo.

Tex., Fort Worth.—Invincible Oil Corp., Geo. W. Lull, Prest., will extend plant; plans \$3,000,000 bond issue.

Tex., Mexia.—Mexia Petroleum Co., capital \$60,000, inceptd. by A. L. Beason, O. A. Stubbs and W. Overstreet.

W. Va., Wheeling.—Blaney Farm Oil & Gas Co., capital \$50,000, inceptd. by Friend Cox, A. B. Imhoff, both Wheeling; H. H. McDonald, West Alexander, Pa.

Hydro-Electric Plants.

Ark., Judsonia.—Arkansas Hydro-Electric Development Co., R. R. James, Prest., Cotton Plant, Ark., will probably let contract to J. Livingstone Co., New York, for hydro-electric plant on Red River; J. E. Sirrine, Constl. Engr., Greenville, S. C. (Lately noted increasing capital to \$3,000,000.)

N. C., Asheville.—French Broad River Development Co., Hendersonville, N. C., is having surveys made for hydro-electric development, to include dam 100x125 ft. high on French Broad River; 800 to 900 H. P., forming lake 30 mi. long and 3 mi. wide; J. H. Pratt, Engr., Chapel Hill, N. C.

Ice and Cold-Storage Plants.

Ala., Huntsville.—J. D. Humphrey interested in erection of 50 to 100-ton capacity ice plant. (See Machinery Wanted—Ice Plant.)

Fla., Fort Pierce.—St. Lucie Ice Co., R. Whyte, Prest., will enlarge plant; install 50-ton unit; increase 24-hour capacity to 80 tons.

Tex., Floydada.—Floydada Ice Co., capital \$10,000, inceptd. by Lon M. Davis, Homer Stein, B. P. Woody.

Tex., Gatesville.—Gatesville Ice Co., E. Routh, Prest.-Mgr., will erect 10-ton capacity ice plant.

W. Va., Huntington.—Fessenmeier Packing Co., M. M. Fessenmeier, Prest., Cumberland, Md., will expend \$100,000 on plant improvements, including 40-ft. brick storage plant with 2500 sq. ft. floor space, double walls, insulated type, capacity 3000 tons reserve storage; increase capacity of ice plant from 100 to 200 tons daily; install additional mech., electrically operated, 1500 H. P.; Paul R. Riddle, Gen. Mgr., 2526 Edmondson Ave., Baltimore, Md.

Irrigation Systems.

Tex., Barstow.—R. B. Thurston, Barstow, Tex.; Dr. Jim Camp, Pecos, Tex., and others are interested in reservoir and irrigation project under construction for irrigating 30,000 acres land in Pecos Valley; construct dam on Sand Lake Basin; depth of water and reservoir 35 ft.; \$500,000.

Tex., Wichita Falls.—Frank Kell interested in construction of reservoir to irrigate 250,000 acres land.

Land Developments.

Fla., Bradenton.—Palma Sola Fruit Co., capital \$60,000, inceptd. with A. F. Wyman, Prest.-Treas.; Philena T. Wyman, V.-P. and Secy.

Fla., Crystal Beach.—City Development Co., capital \$300,000, organized with Jas. A. Fry, V.-P.; Grant Wyrick, Secy.-Treas.; both of Cleveland, O.; develop 365 acres for model city; approximate cost \$1,000,000; Voight-Rourke Co., Engr., Cleveland, O. Lately noted inceptd., capital \$300,000. (See Machinery Wanted—Dredging Machinery; Bricks; Building Materials; Tile; Tanks; Tractors; Electric Machinery.)

Fla., Dade.—Southland Nurseries, 208 New Tatum Bldg., Miami, Fla., organized with Edw. Roney, Prest., Gen. Mgr. and Engr.; John W. Ross, Secy.-Treas.; will develop 339 acres in nurseries; permanent improvements to cost about \$50,000; bids until May 15. (Lately noted under Miami, Fla., inceptd., capital \$150,000.)

Fla., Orlando.—Orlando Orange Grove Co., capital \$500,000, inceptd. with H. W. Barr, Prest.; F. G. Rush, Secy.-Treas.

Okla., Cushing.—Cushing Speedway Park, capital \$25,000, inceptd. by G. M. Shoup, S. W. Tennis and C. R. Griffith.

S. C., Andrews.—Mutual Land & Development Co., capital \$75,000, inceptd. by W. H. and R. M. Andrews, H. L. Smith, Jr.

S. C., Charleston.—Oakley Land & Development Co., capital \$10,000, inceptd. by J. F. Oliver, John M. Thompson.

Tenn., Johnson City.—Will vote May 16 on \$70,000 parks and playgrounds and sewer system improvement bonds. Address The Mayor.

Tex., Brazoria County.—Gulf Coast Orchard Syndicate, capital \$50,000, organized with E. B. Harang, Prest.; H. C. Harang, Secy.; Jacob Linderman, Treas.; all Brazoria, Tex.; develop 211 acres on San Bernard River in magnolia figs and paper-shell pecans; erect farm buildings and preserving plant for figs; approximate cost \$40,000.

Va., Markham.—Belle Meade Farms Co. increased capital from \$150,000 to \$300,000.

W. Va., Beckley.—Clay Huddleston Land Co., capital \$50,000, inceptd. by D. C. Howard, J. J. D. Preston and C. G. Davis, all Charles-ton, W. Va.

Lumber Manufacturing.

Tenn., Memphis.—Madison Land & Lumber Co., capital \$75,000, inceptd. by W. D. Kyser, J. S. Allen, Alfred Sohm.

Va., Norfolk.—Virginia Pile & Lumber Corp., capital \$25,000, inceptd. with C. S. Swartz, Prest.; A. K. Swartz, Secy.

W. Va., Charleston.—English-Ott Lumber Co. increased capital from \$175,000 to \$225,000.

W. Va., Huntington.—Cline-Morgan Lumber Co., capital \$50,000, inceptd. by J. Weaver Cline and P. E. Morgan.

Metal-Working Plants.

Ky., Louisville.—Porcelain.—Standard Sanitary Mfg. Co., 628 Shipp St., let contract to C. A. Koerner, Floyd St., to erect 1-story and

basement 75x200-ft. plant costing about \$46,000; equip for manuf. of porcelain specialties. (Lately noted to erect.)

Md., Baltimore.—Beds.—Simmons Mfg. Co., main office, Kenosha, Wis., will erect 120x182-ft. 2-story brick building with steel frame, costing about \$70,000; J. F. Bennett, Archt., Chicago, Ill.; Clinton O. Nichols, Engr.

Mo., Kansas City.—Metal Specialties.—Janssen-Ostertag, 1229 W. 8th St., let contract to Swenson Construction Co., Shubert Theater Bldg., to erect 2-story addition to plant. (Lately noted to erect.)

Mo., St. Louis.—Accounting Machines.—United Accounting Machines, capital \$3,000,000, inceptd. by Luther A. and Frank Watters, F. J. Oehm.

Va., Norfolk.—Fire-prevention Equipment.—Simplex Fire Alarm-Hydrant Corp., capital \$50,000, inceptd. with C. V. Fleming, Prest.; L. C. Fleming, Secy.

Mining.

Okla., Miami—Lead and Zinc.—New Federal Lead & Zinc Co., capital \$100,000, inceptd. by J. P. Whatley, A. W. Yakish, W. V. French, all of Nowata, Okla.

Tex., Chico (Morris Spur)—Stone.—Texas Stone Products Co., Dallas, Tex. (Lately noted inceptd., capital \$2,000), organized with F. P. Warner, Prest.; E. C. Dodson, V.-P.; Fred. Webber, Secy.; J. W. Ivey, Treas.; A. D. Lewis, Mgr.; will develop 200 acres coal land; daily output 2000 tons. (See Machinery Wanted—Locomotive.)

Tex., Fort Worth—Sand and Gravel.—Union Sand & Mfg. Co., Flatiron Bldg., capital \$100,000, inceptd. with W. W. Connel, Treas.; develop sand and gravel pits, install equipment to handle 400 tons pit run sand and gravel, 350 tons washed material; will erect \$50,000 plant to manuf. reinforced concrete structural units.

Tex., Seamount—Sand and Gravel.—Western Sand & Gravel Co., Wichita Falls, Tex. (Lately noted inceptd., capital \$100,000), organized with J. C. Jopling, Prest.-Mgr., will develop 80 acres sand and gravel; daily output about 10 cars; install mech. (See Machinery Wanted—Boiler.)

Virginia—Mica and Feldspar.—Vicama Mica Co., inceptd. by John W. and J. R. Feldman, 3 Hamilton Row, Hagerstown, Md.; H. C. Field, Rocky Mount, Va.; mine mica and feldspar in North Carolina and Virginia. (See Machinery Wanted—Mining Machinery.)

Miscellaneous Construction.

Ala., Birmingham—Contracting.—Newell Contracting Co. increased capital from \$75,000 to \$250,000.

Ark., Reydel—Flood Gates, etc.—Farely Lake Levee Dist. Comms. let contract to W. P. McGregory & Co. at \$126,837.96 to construct concrete flood gates at mouth of Little Bayou Meto; Ayers & Miller, Engrs., McCall Bldg., Memphis, Tenn. (Bids lately noted.)

N. C., Rocky Mount—Swimming Pools.—Will build memorial swimming pool, also pool in Braswell Park; \$624. Address The Mayor.

Tex., Corpus Christi—Breakwater.—Voted \$100,000 bonds to complete construction of breakwater. Address The Mayor. (Lately noted to vote.)

Tex., Houston—Channel.—Harris County Navigation District Comms. will widen upper part ship channel.

Miscellaneous Enterprises.

Ala., Troy—Potato-curing.—Bentley Lumber Co. will erect 10,000-bu. capacity sweet-potato curing plant.

Ark., Eldorado—Publishing.—Tribune Publishing Co., capital \$75,000, inceptd. by Clyde W. Martin, M. J. O'Neill, W. C. Medley.

Fla., Tampa—Films.—H. A. Kelly will construct \$2,500,000 film city; will erect 14 buildings of brick, tile, concrete and steel construction; 3 outdoor stages, etc.; J. F. Kennard, Archt. (See Machinery Wanted—Building Material and Equipment.)

Ga., Columbus—Steamship Line.—Tristate River Navigation Co., capital \$100,000, inceptd. with H. R. McClatchey, Prest.; operate lines on Chattahoochee, Apalachicola, Chipola and Flint rivers.

Md., Baltimore—Incinerator.—Board of Estimates plans installing Incinerator; specifications drawn by Roland R. Merchant, City Solicitor; Henry G. Perring, Ch. Engr.

Md., Frederick—Laundry.—Gen Steam Laundry, West Patrick St., purchased by William H. Ramsburg will remodel; install mech.

Miss., Natchez—Potato Curing.—Bluff City Cannery, Mr. Zizzi, Prest., let contract for first unit of potato-curing plant; capacity 1000 bus.; contemplate additional units.

N. C., Kinston—Potato-curing.—Chamber of Commerce interested in establishing co-operative storage-house.

Tex., Dallas—Musical Instruments.—D. S. Whittle Music Co. increased capital from \$100,000 to \$200,000.

Tex., San Antonio—Engraving.—Pabst Engraving Co. acquired 3-story building; will remodel.

Tex., San Antonio—Printing.—Southwest Printing Co., 800 Houston St., organized with Clifton George, Prest.; Joe O. Naylor, V.-P.; T. W. Little, Treas.-Mgr.; has building and mech. (Lately noted inceptd. capital \$25,000.)

Va., Alexandria—Transportation.—Washington-Alexandria Transit Co., capital \$20,000, inceptd. with L. Elmer Tull, Prest.; Jas. A. Hardin, Secy.

Va., Norfolk—Publishing.—Guide Publishing Co., P. B. Young, Prest., increased capital from \$9000 to \$12,000.

W. Va., Beckley—Printing.—Beckley Printing Co., capital \$25,000, inceptd. by U. S. Dickens, C. O. Dunn, John W. Lilly.

W. Va., Beckley—Laundry.—Beckley Steam Laundry Co., capital \$125,000, inceptd. by J. W. Beveridge, E. L. Bays, L. M. Slaughter.

W. Va., Grafton—Contractors.—Heger Bros., capital \$100,000, inceptd. by James Heger, Grafton; Joseph N. Kenna, Davis Martin, both Charleston, W. Va.

W. Va., Wheeling—Building.—Wilcox Building Co., capital \$75,000, inceptd. by D. G. Wyant and Charles Holloway, both Wheeling; O. O. Wooleox, Bridgeport, O.

Miscellaneous Factories.

Fla., Arcadia—Bakery.—G. H. Pierson will remodel plant; install \$4000 improvements.

Fla., Gainesville—Medicines.—Dr. Thompson Medicine Co., capital \$10,000, inceptd. with A. V. Hamill, Prest.; W. T. Baker, Secy.-Treas.

Fla., Marianna—Ice Cream, etc.—West Florida Ice Cream & Dairy Co., W. P. Sondepp, Secy.-Treas.; has building; purchased mech.; will install to mfre ice and butter. Lately noted to establish plant. (See Machinery Wanted—Milking Machines.)

Mo., Atlanta—Rubber Products.—Diamond Holfast Rubber Co., 33 Auburn Ave., purchased 11-acre site; will erect factory and 2-story office building; mfre, rubber cement and other volatile rubber compounds.

Ky., Louisville—Monuments.—Woodson & Kratch Monument Co., 798 Baxter Ave., will erect 215x80-ft. factory building; cost \$16,000; equip to mfre. granite monuments.

Ky., Newport—Brewery.—George Weidemann Co. increases capital from \$500,000 to \$1,000,000.

Md., Baltimore—Chemicals, etc.—Orient Spray Co., 230 Pleasant St., capital \$10,000, inceptd. by Percy C. Thornton, John W. Krauss and Edwin J. Farber.

Md., Baltimore—Alcohol.—Maryland Industrial Alcohol Co., capital \$700,000, inceptd. by R. Bennett Darnall, Edw. H. Hammond and Harry E. Karr, all Fidelity Bldg.

Mo., Kansas City—Ice Cream.—Peerless Ice Cream Co., C. P. Myers, Prest.; A. D. Morris, Mgr., purchased site; will erect 4-story plant to mfre. ice cream, butter, etc.

Mo., Kansas City—Bakery.—Warneke Bakery, 14th and Chestnut Sts., let contract to E. E. Williams, 524 W. 40th St., to construct 1-story and part basement 135x60-ft. plant addition; P. H. Anthony, Archt., 1109 Waldheim Bldg. (Lately noted.)

Mo., St. Louis—Ice-cream.—Henry E. Grafman Milk Co., H. E. Grafman, Prest., 1700 N. Vandeventer Ave., let contract to H. O. Hirsch & Co., Wainwright Bldg., to construct 1-story and basement 50x32-ft. ice-cream factory building; F. J. Kolb, Archt., 1700 N. Vandeventer Ave.

Mo., West Plains—Milk Products.—Ozark Milk Products Co. plans increasing capital from \$50,000 to \$100,000; increase plant's daily capacity from 6300 to 80,000 or 100,000 lbs.

Okla., Okmulgee—Paint and Glass.—Burdall Paint & Glass Co., 203 N. Morton Ave. (Lately noted inceptd. capital \$10,000), organized with J. W. Burdall, Prest.-Mgr.; E. J. Burdall, Secy.-Treas.; install mech. (See Machinery Wanted—Roughing and Emery Wheel; Smoother.)

Okla., Oklahoma City—Toilet Specialties.—Heywood Toilet Specialties Co., 305 N. Robinson St., organized with Helen De Young, Prest.; Loren C. Sage, Secy.-Treas.; Edgar Berry, V.-P. and Mgr.; install laboratory mech.; mfre. toilet specialties. Lately noted inceptd. capital \$50,000. (See Machinery Wanted—Pharmaceutical and Toilet Products Machinery.)

Okla., Sand Springs—Tannery.—Oklahoma Tanning & Mfg. Co., Uley Holderman, Prest., Tulsa, Okla., purchased 5-acre site; will establish tannery; expend \$42,000.

Tenn., Memphis—Macaroni.—Diamond Macaroni Co., capital \$25,000, inceptd. by R. D. Buchanan, H. A. Moore and G. L. Voegel.

Tex., Commerce—Paper.—Trinity Paper Mills, Geo. W. Lull, Prest., Dallas, Tex., plans construction paper mill with initial daily output of 50 tons; equip to mfre. writing paper, tissue and blotting paper.

Va., Fredericksburg—Mineral and Vegetable Oils.—Nicholson Supply Corp., capital \$30,000, inceptd.; Geo. B. and Arthur D. Nicholson, Pittsburgh, Pa.; C. O'Connor Goolrick, Fredericksburg, Md.

Va., Richmond—Soft Drinks.—Bis-Mac Co., capital \$250,000, inceptd. with Charles Gunst in charge.

W. Va., Clarksburg—Gass.—F. P. Larmoyeaux & Son, capital \$10,000, inceptd. by Felix Larmoyeaux, Isa W. Monroe and G. H. Duttrile.

W. Va., Ravenswood—Porcelain and Glass.—Ravenswood Porcelain & Glass Co., capital \$500,000, inceptd. by J. H. Camp, J. W. Hall, both Ravenswood; Chas. W. Turnbull, New Haven, W. Va.

W. Va., Nitro—Chemicals.—Federal Chemical Co., capital \$250,000, inceptd. by W. D. Payne, C. P. Miller and John V. Ray; all Charleston, W. Va.

W. Va., Scott Depot—Glass.—Di Bella Glass Co., capital \$10,000, inceptd. by H. H. Pine, E. A. Taylor, both Scott Depot; G. T. Pine, Charleston, W. Va.

Motor Cars, Garages, Tires, Etc.

Fla., St. Petersburg—Garage.—McCrea-Albright Garage will erect \$25,000 addition; 1 story.

Ky., Erlanger—Garage.—F. W. Dempsey will erect garage; 1 story; part basement; 61x102 ft.; concrete block; Alfred Dailey, Archt.

Md., Baltimore—Accessories.—Lyon Mfg. Co., 2 E. Lombard St., capital \$100,000, inceptd. by Robert H. and Walter R. Lyon, Wm. Cunningham, Archt.

Md., Salisbury—Garage, etc.—White Sales & Service Co., capital \$100,000, inceptd. by Thomas J. Ryan, Louis Klee, W. W. Woodcock.

Miss., Moss Point—Garage.—John H. Hill and Kinross McIntosh let contract for garage.

Mo., St. Louis—Garage.—Arthur T. Morey, 5565 Bartner Ave., will erect garage; 1 story; 100x140, 50x80 ft.; contract let; Norman B. Howard, Archt., 398 Arcade Bldg.

Tenn., Nashville—Garage.—Geo. W. Killebrew will erect \$15,000 garage; 1 story; brick.

Tenn., Nashville—Garage.—Flite, French & Welsh will erect automobile building.

Tex., Dallas—Garage.—Stanley Crabbe will erect garage; 1 story; brick; 50x150 ft.; \$12,000; A. C. Schwarz & Co., Contr.; C. D. Hill & Co., Archt. (Lately noted.)

Tex., Houston—Tires.—Bering Tire & Repair Co., 100 Main St., will erect 3-story 75x100-ft. building; fireproof. (Lately noted increasing capital.)

Tex., San Antonio—Garage.—Manton & Givens will erect 100x100-ft. garage; tile construction; S. A. Freeborn, Contr. (Lately noted.)

Va., Norfolk—Automobiles.—J. R. Callum & Co., inceptd., capital \$40,000, organized with J. R. Callum, Prest.; Stanleigh H. Jones, Secy.

Va., Richmond—Rubber, etc.—Pioneer Products Co., capital \$1,000,000, inceptd. with H. C. Wilder, Prest., Malone, N. Y.; W. C. Faulkner, Secy., Richmond.

W. Va., Morgantown—Automobiles.—Tourist Service Club, capital \$50,000, inceptd. with Herman D. Stillman, Robert F. Lempley, both Morgantown; Edw. D. Sweeney, Connellsburg, Pa.

W. Va., Parkersburg—Automobiles.—Crane Motor Co., capital \$25,000, inceptd. with J. Paul Crane, M. G. Crane, both Grafton, W. Va.; E. W. Watson, Tunnelton, W. Va.

W. Va., Richwood—Garage.—Yew Pine Garage, capital \$25,000, inceptd. with W. H. Odell, L. H. Groves, both Richwood; W. S. Taylor, Jr., Fenwick, W. Va.

W. Va., Wheeling—Garage.—Wheeling Traction Co. will erect garage and line shop; 1 story; 40x119 ft.

Road and Street Construction.

Ala., Attalla—Will pave 9 blocks; vitrified brick. Address The Mayor.

Ala., Carrollton—Will gravel streets; W. W. Beasley, Mayor.

Ala., Livingston—Sumter County will construct 17½ mi. hard-surface road; \$200,000 available; bids until May 18; W. S. Keller, State Highway Engr., Montgomery, Ala. Lately noted. (See Machinery Wanted—Road Construction.)

Ala., Montgomery—Let paving contracts as follows: Hodgson & Jones, sidewalks on Clayton and Union Sts.; F. C. Wilkes, sidewalks on Summit St.; W. A. Smith, City Clerk.

Ala., Opelika—Lee County will construct road from Opelika to Waverly; sell \$5,000 warrants; \$75,000 State and Federal aid. Address County Comr. ss.

Ark., Fayetteville.—Will construct 25,000 sq. yds. asphaltic macadam pavement; 8600 lin. ft. concrete curbing; 34,000 sq. ft. concrete gutter, etc. bids until May 12; T. L. Hart, Secy. City Comms.; E. M. Ratliff, Engr. (See Machinery Wanted—Paving.)

D. C., Washington.—Will pave streets and avenues; sheet asphalt; bids until May 16; Charles W. Kutz, Commr., Room 509 Dist. Bldg. (See Machinery Wanted—Paving.)

Ga., Abbeville.—Wilcox County will construct road on Dixie highway; voted \$100,000 bonds. Address County Comms. Roads and Revenue. (Lately noted to vote.)

Ga., Bibb City (P. O. Columbus).—Will sell \$150,000 bonds for street, sewer and light improvements. Address The Mayor. (Lately noted to vote.)

Ga., Jasper.—State Highway Dept. of Georgia, Atlanta, Ga., will construct 7,850 mi. highway from Jasper to Cherokee County line; clay-bound macadam; Federal-aid Project 119; bids until April 28; W. R. Neel, State Highway Engr. (See Machinery Wanted—Road Construction.)

Ga., Sylvania.—Screven County let contract to Pritchard, Raines & Hazlehurst Construction Co., 1001 Savannah Bank & Trust Co., Savannah, Ga., at \$30,000 for 12 mi. sand-clay road. Lately noted. (See Machinery Wanted—Mixer; Pump.)

Ky., Jackson.—State Highway Coms., Frankfort, Ky., let contract to Dempster Construction Co. at \$40,237.10 for 2.4 mi. grading and draining on Jackson-Wolfe County road, Breathitt County; State Project No. 4, Section A; Joe S. Boggs, State Highway Commr., Frankfort, Ky. (Lately noted inviting bids.)

Ky., Mt. Sterling.—Will construct streets; vitrified brick, asphalt, tarvia or bitulithic with concrete foundation, etc.; 9200 sq. yds. paving; 7100 ft. curb and gutter; bids until May 3; M. C. Ayres, City Clk. (See Machinery Wanted—Paving.)

La., Alexandria.—Rapides Parish will grade 4½ mi. Lecomepte-Red River road; bids until May 10; J. F. Ball, Prest. Police Jury. (See Machinery Wanted—Road Construction.)

La., Kentwood.—Will construct 4 mi. concrete sidewalk; bids until May 10; C. D. Strickland, Mayor. (See Machinery Wanted—Paving.)

Md., Baltimore.—Board of Awards will grade and pave alleys in Contracts 71 and 72; cement concrete; bids until May 4; A. E. Christhill, Highways Engr. (See Machinery Wanted—Paving.)

Md., Cambridge.—Dorchester County will sell \$60,000 bonds for road construction; Wm. H. Leonard, Jr., Clk. County Comms.

Miss., Aberdeen.—Monroe County will vote May 2 on \$100,000 bonds for road construction; G. S. Clopton, Election Commr.

Miss., Magnolia.—Pike County let contract to Nealy Construction Co., Jackson, Miss., at \$238,863, for 6.4 mi. vitrified brick road between Magnolia and McComb City. Address County Supr.

Miss., Pascagoula.—Jackson County let contract to John Gerking for 15,000 yds. concrete road; \$45,000 available; J. E. Cazine, Engr. (Lately noted voting bonds.)

Mo., Albany.—State Highway Board, Jefferson City, Mo., will construct 6.26 mi. State road from Albany; Project 57, Section A; \$14,848.21; bids until May 4; A. C. Lingley, Div. Engr., St. Joseph, Mo. (See Machinery Wanted—Road Construction.)

Mo., Bowling Green.—State Highway Dept., Jefferson City, Mo., will construct 3.91 mi. State-aid Project S-20.30; \$21,161.60; bids until May 5; M. J. Harrick, Div. Engr., Macon, Mo. (See Machinery Wanted—Road Construction.)

Mo., Clayton.—St. Louis County will construct 2 mi. St. Charles Rock road to St. Charles bridge; low bidder, Wm. McDonald Construction Co., at \$61,666.88; Wm. Elbring, County Engr.

Mo., Forsyth.—State Highway Dept., Jefferson City, Mo., will construct 2.27 mi. State road from Coon Creek; Federal-aid Project No. 70; gravel pavement; \$12,793.04; 1.82 mi. State road from Coon Creek; Federal-aid Project No. 71; \$14,986.62; both Taney County; bids until May 3. Lately noted. (See Machinery Wanted—Road Construction.)

Mo., Kansas City.—Board Public Works let contract to Norton Bros. at \$345,070 for grading, regrading and constructing retaining walls on 23d St. traffic way. (Lately noted.)

Mo., Linn.—State Highway Dept., Jefferson City, Mo., will construct 4.84 mi. State road from Freeburg; State-aid Project S-20.27; \$6471.01; bids until May 2; H. D. Griffith, Div. Engr., De Soto, Mo. (See Machinery Wanted—Road Construction.)

Mo., Poplar Bluff.—State Highway Dept., Jefferson City, Mo., will construct 15.09 mi. Federal-aid Project 59, Section A; gravel pavement; \$224,294.47; 4 mi. Greenville-Poplar Bluff road, Federal-aid Project 59, Section B; concrete pavement; \$21,458.86; bids until May 30; M. S. Murray, Div. Engr., Sikeston, Mo. (See Machinery Wanted—Road Construction.)

N. C., Charlotte.—Mecklenburg County will construct roads; voted \$2,000,000 bonds. Address County Comms. (Lately noted to vote.)

N. C., Danbury.—Stokes County will construct roads; vote May 16 on \$355,000 bonds; N. Earl Wall, Clerk County Comms.

N. C., Gastonia.—Gaston County will sell \$100,000 bonds for road construction; L. E. Rankin, Clerk County Comms.

N. C., Mebane.—Will improve streets; \$155,000 available; bids until April 28; W. M. Piatt, Engr., Durham, N. C. Lately noted. (See Machinery Wanted—Paving.)

N. C., Newton.—Catawba County will construct roads; voted \$500,000 bonds. Address County Comms. (Lately noted to vote.)

N. C., Wentworth.—Rockingham County will receive bids on 4 to 4½ mi. asphalt road from Spray to Draper; \$150,000 available; W. B. Kiker, Engr., Reidsville, N. C. (Lately noted.)

N. C., Winston-Salem.—Forsyth County will construct 7 mi. hard-surface road; \$210,000. Address County Comms.

Okla., Okmulgee.—Okmulgee County sold \$68,000 bonds for road construction; Grace E. Morton, Clk.

Okla., Wagoner.—State Highway Dept., Oklahoma City, let contract to Froehle-Briscoe Construction Co., Muskogee, Okla., for 17 mi. gravel roads; \$225,000 available; B. E. Clark, State Highway Commr., Oklahoma City. (Lately noted.)

S. C., Bamberg.—Bamberg County will construct 4.242 mi. Charleston-Augusta road; Federal-aid Project N-70-C; low bidder, W. P. Mayfield, Lees, S. C., at \$15,464.30; W. B. Smoak, County Supr. (Lately noted inviting bids.)

S. C., Camden.—Kershaw County let contract to Stewart-Jones Co., Rock Hill, S. C., for constructing road from Camden to Richland County line. Address County Comms.

S. C., Greenville.—Will construct 4000 yds. concrete paving; will invite bids; W. D. Neves, City Engr.

S. C., Greenville.—Let contract to Slattery & Henry, at \$20,000 for paving E. North St and link on Hampton Ave.; W. D. Neves, City Engr.

S. C., Rock Hill.—Sold \$100,000 bonds for

street paving. Address The Mayor. (Lately noted.)

S. C., Union.—Will construct 2.4 mi. Union-Buffalo and .5 mi. Union-Monarch road; bids until Apr. 28; E. W. Stone, Secy. Highway Coms. Union Township. (See Machinery Wanted—Road Construction.)

S. C., Walhalla.—Oconee and Pickens counties will let contract for constructing road from Ravenel's bridge to Clemson College. Address Oconee County Comms., Walhalla, and Pickens County Comms., Pickens, S. C.

S. C., Walhalla.—Oconee County let contract to C. C. Jordan at \$16,659 for grading and topsoiling road from Seneca to Ravenel's bridge. Address County Highway Coms. (Supersedes recent item.)

Tenn., Byrdstown.—Pickett County will construct roads; voted \$50,000 bonds. Address County Comms.

Tenn., Lawrenceburg.—Will sell \$50,000 bonds for street improvements; E. E. McNely, Commissioner of Finance.

Tenn., Memphis.—Shelby County let contract to Oliver Construction Co., Little Rock, Ark., at \$235,200 for concrete-surfacing road from Memphis to Marion; 8½ mi.; Morgan Engineering Co., Engrs., Memphis.

Tenn., Morristown.—Hamblen County will sell \$25,000 bonds for highway construction; J. G. Templin, Clk. County Court.

Tenn., Rutledge.—Grainger County will sell \$35,000 bonds for road construction; J. M. Grove, County Clk.

Tex., Anahuac.—Chambers County will construct roads in District 2; vote on \$60,000 bonds. Address County Comms.

Tex., Dallas.—Dallas County will sell \$2,700,000 bonds for constructing East Pike, Coppel, Preston and other roads; Chas. E. Gross, County Auditor.

Tex., Georgetown.—Williamson County let contract to Brown & Root, Taylor, Tex., for 11 mi. road from Georgetown through Round Rock; H. A. Hodges, County Auditor. (Lately noted inviting bids.)

Tex., La Grange.—Fayette County will complete 7 mi. highway; voted \$100,000 bonds. Address County Comms. (Lately noted to vote.)

Tex., Rusk.—Cherokee County will extend roads; vote May 17 on bonds. Address County Comms.

Tex., Rusk.—Cherokee County let contract to Smith Bros., Crockett, Tex., at \$200,000 for 40 mi. roads; C. H. Gibson, County Judge. (Lately noted inviting bids.)

Tex., Wharton.—Wharton County will improve Louise-Hahn-Taiton road; bids until May 2; J. P. Taylor, County Auditor. (See Machinery Wanted—Road Construction.)

Va., Danville.—Let contract to J. M. Gregory at \$75,000 for 14.5 mi. Callands road; A. D. Starling, Chrmn. Good Roads Coms. of Chamber of Commerce. (Lately noted inviting bids.)

Va., Rustburg.—Virginia State Highway Coms., 116 S. 3d St., Richmond, let contract to W. W. Boxley Co., Roanoke, Va., for completing 5.4 mi. bituminous macadam road on State Road No. 14; Campbell County, Va., Project 84; G. P. Coleman, State Highway Commr., Richmond. (Lately noted inviting bids.)

Va., Va., Rustburg.—Virginia State Highway Coms., 116 S. 3d St., Richmond, let contract to W. W. Boxley Co., Roanoke, Va., for completing 5.4 mi. bituminous macadam road on State Road No. 14; Campbell County, Va., Project 84; G. P. Coleman, State Highway Commr., Richmond. (Lately noted inviting bids.)

Va., Va., Hinton.—Summers County will grade and drain 2 mi. road in Pipistem Dist.; bids until May 2; J. D. French, Road Engr.

Va., Va., Fairmont.—Marion County will grade and construct pavement on 1 mi. Boothsville road in Grant Dist.; 1 mi. Teverbaugh road in Lincoln Dist.; bids until May 8; Lee N. Satterfield, Clk. County Court. (See Machinery Wanted—Road Construction.)

W. Va., Martinsburg.—Let contract to P. Flanigan & Sons, Baltimore, at \$184,040.95 for street paving; John H. Zirkle, City Recorder. (Lately noted inviting bids.)

W. Va., Moundsville.—Marshall County will hard-surface 1 mi. road in Clay Dist.; brick on concrete base; concrete curb and gutter; bids until May 3; Alex. Purdy, County Road Engr. (See Machinery Wanted—Road Construction.)

W. Va., Welch.—Will grade and pave Mercer, Ash, Beech and other streets; bids until May 3; Paul W. Jones, Recorder. (See Machinery Wanted—Paving.)

Sewer Construction.

Ala., Birmingham.—Will install sanitary sewers (Improvement Ordinance No. 86-D); bids until Apr. 26; Julian Kendrick, City Engr. (See Machinery Wanted—Sewers.)

Fla., Miami.—Will construct sanitary sewers; $\frac{3}{4}$ mi. 8 to 24-in. terra-cotta pipe sewers; bids until May 19; Chas. W. Murray, City Engr. (See Machinery Wanted—Sewers.)

Ga., Bibb City (P. O. Columbus).—Voted \$45,000 sewerage bonds. Address The Mayor. (Lately noted to vote.)

Md., Baltimore.—Will construct lateral sewers and house connections in Dist. No. 12-A, Sanitary Contract No. 180; 6510 lin. ft. 8 to 18-in. sewers, 2330 lin. ft. house connections, 500 lin. ft. underdrain and 25 manholes; bids until May 4; Mayor Wm. F. Broening, Prest. Board of Awards; A. E. Christhill, Highways Engr.; H. G. Perring, Ch. Engr. (See Machinery Wanted—Sewers.)

Md., Hyattsville.—Washington Suburban Sanitary Coms., W. T. S. Curtis, Prest., Evans Bldg., Washington, D. C., let contract to C. W. Ensign, Harrisburg, Pa., to construct sewer lines; R. B. Morse, Engr., Hyattsville.

Mo., Eldon.—Will construct sewer system; E. T. Archer & Co., Engrs., 609 New England Bldg., Kansas City, Mo.; E. T. Collins, City Clk. (Lately noted contemplated.)

Mo., Lees Summit.—Will construct sewers; E. T. Archer & Co., Engrs., 612 New England Bldg., Kansas City, Mo. E. S. Bennett, Mayor.

Mo., Marshall.—Will construct 9000 ft. 6 to 15-in. sewers, 16 manholes and 4 flush tanks in Sewer Dist. No. 2; Shockley Engr. Co., Engr., Kansas City, Mo.

Mo., Neosho.—Will construct sewer system; Black & Veatch, Engrs., Mutual Bldg., Kansas City, Mo.; Chas. Prettyman, Mayor.

Tenn., Johnson City.—Will vote May 16 on \$70,000 sewer system and park and playgrounds improvement bonds. Address The Mayor.

Tex., Center.—Will vote May 27 on \$100,000 bonds to install sewer system and extend water-works. Address The Mayor.

Tex., Clifton.—Will vote on bonds to install sanitary sewers and disposal plant. Address The Mayor.

Tex., Dalhart.—Voted \$20,000 sewer-extension bonds. Address The Mayor.

Tex., Dallas.—Plans constructing 1½ mi. sewers in Pacific Ave. from Olive St. to Trinity River; 24 to 36-in. reinforced concrete and 15 to 24-in. vitrified clay tile pipe; G. D. Fairtrace, City Engr.

Tex., Hearne.—Will install sewer system. Address The Mayor.

Tenn., Strawn.—Plans installing sanitary sewer system and improving streets. Address The Mayor.

Va., Alexandria.—Contemplates sewer improvements; E. C. Dunn, City Engr.; private plans. Address The Mayor.

W. Va., Welch.—Will install sewers in Mercer St. from Court to Ash Sts.; Beech St.

from Woodmont Addition to Elkhorn Addition; Hobart St. from North Highland Addition to city; bids until May 3; L. A. Osborn, City Engr.; Paul W. Jones, Recorder. (See Machinery Wanted—Sewers.)

W. Va., Wheeling.—Will construct sewer lines; Harry Conrad, Engr.; C. O. Elphian, City Mgr.

Shipbuilding Plants.

Fla., Petersburg.—Marine Ways Machine Co. J. W. Appley, Prop., 7th St., will expand \$50,000 on plant improvements; erect 50x150-ft. shop of cement-block construction; has one 50x150-ft. site with 50-ft. harbor frontage and 50x300-ft. site; install mech.; all purchased.

Telephone Systems.

Fla., Arcadia.—Arcadia Telephone Co. purchased by J. L. Kirk, Mattoon, Ill.

Md., Annapolis.—Navy Dept., Bureau of Yards and Docks, Washington, D. C., will erect two 60-ft. radio towers; has plans.

N. C., Denmark.—American Telephone & Telegraph Co., 195 Broadway, New York City, will erect 2-story-and-basement 78x82-ft. telephone-operating building; Murphy & Dana, Archts., 331 Madison Ave., New York.

Va., Galax.—C. & G. Telephone Co., capital \$10,000, inceptd. with Chas. P. Waugh, Prest.; E. E. Chappell, Secy.

Textile Mills.

Ala., Alexander City—Cotton Goods.—Alexander City Cotton Mills, Fletcher Comer in charge, will install 200 additional looms; now has 304 looms.

Miss., Magnolia—Cotton Products.—Magnolia Textile Corp., Harris Hyman, Prest., 1224 St. Thomas St., New Orleans, La., plans constructing 75x70-ft. addition to cotton factory; to be used as clothroom.

Water-Works.

Fla., White Springs.—White Springs Mineral Water Co. inceptd. with \$200,000 capital.

Mo., Higginsville.—Sold \$12,000 water and electric-light bonds. Address The Mayor.

N. C., Gastonia.—Let contract to Tucker & Laxton, Charlotte, N. C., to construct 2,000,000-gal. capacity reinforced concrete filter plant; R. G. Cherry, Mayor.

Okl., Kaw City.—Will vote May 6 on \$35,000 water and electric systems extension bonds; construct building; lay 15,000 ft. water mains; extend water service to 348 additional residences. Address The Mayor.

S. C., Florence.—Will construct 5200 ft. 6-in. east-iron water mains with fittings; bids until May 2; Adams & Ervin, Civil Engrs.; H. K. Gilbert, Mayor. Lately noted voted bonds. (See Machinery Wanted—Water-works.)

Tenn., Martin.—Sold \$100,000 water and light improvement bonds; bids on construction in about 6 weeks; Frank L. Wilcox, Engr., Chemical Bldg., St. Louis, Mo.

Tenn., Ballinger.—Voted \$10,000 water-works improvement bonds. Address The Mayor. (Lately noted to vote.)

Tex., Center.—Will vote May 27 on \$100,000 bonds to extend water-works and install sewer system. Address The Mayor.

Tenn., Clifton.—Will vote on bonds to improve water-distributing system. Address The Mayor.

Tex., Point Isabel.—Navy Dept., Bureau of Yards and Docks, Washington, D. C., will install water-works; has plans.

Tex., Pittsburg.—F. E. Prince let contract to drill 8-in. well; construct storage tank and lay water mains at box factory.

Va., Norfolk.—Will construct concrete water drains in Smith's Creek; 1000 lin. ft. monolithic or precast double 4x6-ft. drain and 500 lin. ft. precast or monolithic double 4x6-ft. reinforced concrete drain; all on pile foundation; bids until May 4; Walter H. Taylor 3d, Director of Public Works; David A. Decker, Water and Sewers Engr.; Chas. M. Ashburner, City Mgr. (See Machinery Wanted—Water-works.)

Woodworking Plants.

Fla., Bartow.—Crates.—Roux Crate Co. inceptd. with \$300,000 capital will erect plant at Lake Garfield with annual capacity of 2,000,000 crates; install mech.

Fla., Manatee—Sash, Doors, etc.—Updegraff Lumber Co., A. D. Updegraff, Prest., will erect 50x125-ft. plant addition; construction by owner; install 10-in. moulder, shaper, jointer, tenoning machine, sander and lathe. (See Machinery Wanted—Sawmill; Woodworking Machinery.)

Ky., Louisville—Desks.—Wigginton Desk Mfg. Co., capital \$250,000, inceptd. with James L. Wigginton, Prest.; D. L. Ogden, Secy-Treas.; Charles S. Clarks, Gen. Mgr.; to manf're desks and office tables.

Okl., Oklahoma City—Sash and Doors.—Oklahoma Sash & Door Co., 609 W. 2d St., will erect 2-story planing mill, brick construction; \$20,000.

Tex., Point Isabel—Woodworking.—Navy Dept., Bureau of Yards and Docks, Washington, D. C., will erect carpenter shop; has plans.

Fire Damage.

Ala., Flora.—Acme Cafe; C. C. Beasley & Son's store; H. O. Martin's market.

Ark., Corning.—J. W. Black Lumber Co.'s yards, loss \$75,000; Christian Church, \$10,000 (address The Pastor); J. M. Hawk's residence, \$10,000.

Fla., Tampa.—Six dwellings on La Salle St., owned by E. Leira, Howard Ave.; 2-story residence at 848 Laurel St., occupied by Vincenzo Gonzalez; cigar factory on La Salle St., operated by Manuel Fernandez, and other dwellings.

Ga., Moultrie.—I. Golden's department store; loss \$35,000.

Ky., Paducah.—Paducah Iron Co.'s, Paducah Leather Co.'s and Grand Leader's buildings; loss \$25,000.

La., New Orleans.—James P. Sutton Steel & Structural Iron Foundry; loss \$15,000.

Miss., Cleveland.—S. C. Taylor's residence.

Mo., Kansas City.—Suburban Motor Transfer Co., 306 Westport Ave.; loss \$51,000.

Mo., Kansas City.—Frank B. Chase Novelty Co.'s plant, 304 W. 9th St.; loss \$5300.

Mo., Kansas City.—Kansas City Athletic Club's clubhouse, on Robert Gilham Rd. at 33d St.; loss \$10,000.

Mo., Kansas City.—Husted Syndicate Oil Co.'s refining plant, 16th St. and Cookson Ave.; loss \$25,000.

Mo., Perry.—Masonic hall.

Mo., St. Louis.—Easton Auto & Garage Co.'s building, 5610 Easton Ave.; loss \$15,000.

N. C., Burgaw.—Pender Tobacco Co.'s warehouse.

N. C., Henderson.—Landis Motor Co.'s plant and Banner Warehouse; loss \$100,000.

N. C., Lattimore.—Verner Oil Co., Southern Cotton Oil Co. and Farmers' Mercantile Co.'s warehouses.

S. C., Bennettsville.—D. K. McColl's cotton gininery.

Tenn., Chattanooga.—Southern Hosiery Mill,

concrete
in. ft.
drain
double
n pile
er H.
David
Chas.
hinery

Wm. L. McAllester, Mgr., William and 17th
Sts.; loss \$50,000.

Tenn., Gallatin.—Farmers' Loose Leaf
Warehouse Co.'s warehouse.

Tenn., Murfreesboro.—Henry Kingon's resi-
dence, East Main St.

Tex., Del Rio.—First Christian Church; loss
\$30,000. Address The Pastor.

Tex., Nacogdoches.—M. G. Hazel's residence.

Tex., Saratoga.—Saratoga State Bank; Jack-
son's restaurant.

Tex., Sweetwater.—Sweetwater Seed & Grain
Co.'s cotton warehouse.

Tex., Waco.—Albert T. Clifton's residence
at 2604 Austin Ave.; loss \$15,000 to \$20,000.

Va., Danville.—Coates' Dairy, owned by
Paul Tarpley; loss \$20,000.

Damaged by Explosion.

S. C., Lumber.—D. T. McKeithan Lumber
Corp.'s plant; loss \$30,000.

Damaged by Storm.

Ga., Woodbury.—Mrs. W. M. Ware's five
dwellings; Congregational Church; both 2
mi. from Woodbury. Address The Pastor.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment-Houses.

Ark., Little Rock.—Johnson-Dickinson Co.
will erect 2 apartment-houses at 1421 W. 7th
St. and 1413 Arch St.; 2 stories; total cost
\$17,500.

Fla., St. Petersburg.—B. S. Doolittle will
erect \$60,000 apartment-house at 3d St. and
Second Ave. N.; brick and frame; will also
erect 3-suite apartment-house and double
garage; H. E. Wendell, Archt.

Fla., St. Petersburg.—E. R. Brown will erect
apartment-house and garage at 8th St. and
Seventh Ave.; 3 suites; brick and frame; H. E.
Wendell, Archt.

Fla., St. Petersburg.—Fred. Wadford will
erect apartment-house at 1027 Central Ave.;
concrete; 4 suites; store on first floor; H. E.
Wendell, Archt.

Fla., St. Petersburg.—H. E. Wendell pre-
pared plans for \$40,000 to \$50,000 apartment-
house, 8th St. and Third Ave. N.; 10 suite;
brick and frame; supposed owner, Mrs.
Pringle.

Fla., St. Petersburg.—H. E. Wendell pre-
pared plans for 18-suite apartment-house at
4th St., near Fourth Ave. N.; brick and
frame.

Fla., St. Petersburg.—H. G. Brandeau will
erect apartment-house on Central Ave., near
11th St.; brick and concrete; 4 suites; 2
stores on first floor; also erect frame apartment-
house at 832 Second Ave. N.; 2 suites;
H. E. Wendell, Archt.

Fla., St. Petersburg.—Joe Solomon will
erect brick apartment-house on 9th St., near
Central Ave.; 6 suites; 4x100 ft.; 2 stores on
first floor; H. E. Wendell, Archt.

Fla., St. Petersburg.—Joseph Lutz will
erect apartment-house and garage at 2d St.
and Third Ave. S.; concrete; 7 suites; H. E.
Wendell, Archt.

Fla., St. Petersburg.—J. E. Crook will erect
brick and frame apartment-house on 6th St.
S.; 4 suites; H. E. Wendell, Archt.

Fla., St. Petersburg.—Samuel Riley will erect
frame apartment-house at 840 Second Ave. N.;
4 suites; H. E. Wendell, Archt.

N. C., Reidsville.—A. P. Sands plans to erect
4-suite apartment-house on Lindsey St.
(Lately noted under Dwellings.)

Tex., Dallas.—W. S. Skiles will erect \$11,-
000 apartment-house at 1029-31 King's High-
way; 2 stories; brick veneer.

Tex., Dallas.—D. E. Hedgecock will erect
\$2,000 apartment-house at 2719-21 Cleveland
St.; 2 stories; brick veneer.

Tex., El Paso.—S. E. Ord will erect 2-story
addition to apartment-house at Mundy Heights
addition; cost \$10,000.

Tex., Houston.—L. Gabert will erect \$16,000

Tex., Waco.—Albert T. Clifton's residence
at 2604 Austin Ave.; loss \$15,000 to \$20,000.

Va., Danville.—Coates' Dairy, owned by
Paul Tarpley; loss \$20,000.

and stucco; built-up roof; cement and wood
floors; G. H. Thomas Washburn Co., Archt.;
bids opened May 1 by owner.

W. Va., Lumberport.—Lumberport Bank,
Dr. L. C. Oyster, V.-P., will erect bank
building; plans not made.

W. Va., Welch.—First National Bank will
erect building.

Churches.

Ark., El Dorado.—First Methodist Church,
Rev. J. A. Henderson, Pastor, will erect \$130,-
000 church and Sunday-school building;
brick; terra-cotta trim; auditorium to seat
800; roof garden; John P. Almand, Archt.,
Little Rock.

Ky., Louisville.—St. Benedict's Catholic
Church will erect church, parochial school
and rectory at 25th St. and Osage Ave.; cost
\$100,000; brick veneer. Address The Pastor.

La., Alexandria.—Calvary Baptist Church,
Dr. A. J. Barton, Pastor, E. C. Mounce,
Chrmn. Bldg. Comm., will erect Sunday-school
building and community center at Bolton
Ave. and Jackson St.; cost \$60,000 to \$70,000;
72x100 ft.; Joe Carver, Archt.

Mo., Columbia.—First Baptist Church will
erect \$250,000 building; Ferrand & Fitch,
Archts., St. Louis.

Mo., Joplin.—Central Ave. Methodist
Church will enlarge building; classrooms,
kitchen, parlors, etc. Address The Pastor.

Mo., Kansas City.—Country Club Christian
Church, Rev. Geo. Hamilton Coombs, Pastor;
P. H. Hopkins, Chrmn. Comm., plans to
erect building on Ward Parkway, from 61st to
62d Sts.; site 32x200 ft.

Okla., Altus.—Baptist Church, George C.
Wright, Chrmn. Bldg. Comm., will erect \$75,-
000 building; 76x136 ft.; brick; wood floors;
Woodruff & Vanslike, Archts., Fort Worth,
Tex. (Lately noted.)

Tenn., Nashville.—Judson Memorial Baptist
Church will erect \$10,000 addition to building
at 8th Ave. and Glen St.; brick. Address
The Pastor.

Va., Lynchburg.—Trinity Methodist
Church, Rev. Luther L. Hitt, Pastor, will
erect church and Sunday-school building.

City and County.

Ky., Whitesburg—Jail.—Letcher County
Comms. will receive bids until May 3 to re-
pair county jail; Fess Whitaker, County
Judge.

Md., Baltimore—Police Stations.—Public
Improvement Coms., Robt. Garrett, Chrmn.,
Garrett Bldg., plans to erect 7 subpolice stations
in new annex; on Belair Rd. between
Overlea and city line; Harford Rd. between
Lauraville and city line; Hamilton Ave. near
Harford Rd.; Falls Rd. at Mt. Washington;
Reisterstown Rd. between Garrison Ave. and
city line; Edmondson Ave. at Ten Hills;
Washington Rd. and Letitia Ave.; extend
telephone system to connect new substations;
also enlarge garages at Central,
Northwestern and Southwestern police stations;
total cost about \$130,000.

N. C., Charlotte—Home.—City and Mecklen-
burg County will erect \$20,000 detention
home; 2 stories and basement; 40x70 ft.;
slate roof; rift pine floors; low-pressure
steam heat; electric, deleo or similar lighting;
Louis H. Ashbury, Archt.; bldg. opened
May 3. Address J. B. McLaughlin, Chrmn.
Board County Comms. (Lately noted.)

Okla., Muskogee.—Plans to erect conven-
tion hall and armory. Address The Mayor.

Dwellings.

Fla., Jacksonville.—First Unitarian Church, Rev. J. A. J. Coleman, Pastor, will erect \$10,000 parsonage on Hogan St.

Fla., Miami.—Edwin H. George will erect residence on Avenue H, between 14th and 15th Sts.; stucco; native rock front and porch.

La., Baton Rouge.—Mrs. Leo Kahn will erect \$10,000 frame residence on Florida St.

La., New Orleans.—Allain C. Andry, Secy. Fidelity Homestead, purchased 8 lots on Calhoun St., between Barrett and Peters Sts., and plans to erect dwellings.

Md., Baltimore.—Owners' Realty Co., 2 E. Lexington St., will erect 11 two-story dwellings on Virginia Ave. near Reisterstown road; cost \$22,000; Fredk. E. Beall, Archt., 1335 N. Gilmor St.

Md., Baltimore.—Lillian Eagleston, 205 Overland Ave., Hamilton, will erect \$10,000 residence; 35x31 ft.; frame; slate roof; Alabama pine floors; Clyde N. Friz, Archt., Lexington Bldg.

Md., Baltimore.—Walter Koch, 2902 Springhill Ave., will erect 6 two-story dwellings on Springfield Ave. near Towanda Ave.; cost \$18,000.

Md., Millersville.—Baldwin Memorial M. E. Church will erect \$15,000 parsonage; 25x47 ft.; Dutch colonial type; Roy G. Pratt, Archt., American Bldg., Baltimore.

Mo., Fulton.—N. O. Brown, Contr., will erect 5 bungalows at 8th and Nichols Sts.; cost \$20,000.

Mo., Kansas City.—R. T. Morrison, Morrison Grain Co., purchased site at 821 W. 59th St. and plans to erect residence.

Mo., Kansas City.—Henry L. Waters will erect 2-story Dutch colonial residence at 639 W. 62d St.; white siding and gray shingles; Courtlandt Van Brunt, Archt.

S. C., Columbia.—E. L. Summersett & Co. will erect 5 two-story dwellings and 1 one-story dwelling on 900 block Meadow St. and 900 block Carolina Ave.; cost \$15,000.

Tenn., Knoxville.—Dr. R. L. Bellamy will erect residence at Hill Ave. and Maplehurst St.; 6 rooms and basement; French tile roof; hardwood, concrete and tile floors; hot-water heat; electric lights; hollow fireproof tile; Thomas Brown, Archt., Holston Bldg.; bids opened about May 1. (Lately noted.)

Tex., Dallas.—Dines Building Co. will erect \$18,000 residence at 5606 Gaston St.; 9 rooms; brick veneer.

Tex., Dallas.—F. B. Dunlap will erect 4 frame cottages at 4818-22-26-30 Lindsley St.; 5 rooms; cost \$11,000.

Tex., Dallas.—Power Investment Co. will erect 23 frame cottages; 4 and 5 rooms; cost \$43,000.

Tex., Houston.—Edwards & Gauthrop will erect 3 bungalows.

Tex., San Antonio.—David A. Lown, Archt., and associates purchased 24 lots on W. Craig Pl. and plan to erect bungalows.

Tex., San Antonio.—Dr. Garrett P. Robinson will erect 2-story hollow tile and stucco residence on Summit Pl.; 10 rooms; Altee B. and Robt. M. Ayres, Archts.

Tex., San Antonio.—Z. D. Bonner will erect residence; Phelps & Dewees, Archts.

Tex., San Antonio.—Dr. J. S. Steele will erect 2-story hollow-tile residence at Laurel and Shook Sts.; Phelps & Dewees, Archts.

W. Va., Clarksburg.—Harrison County Real Estate Co. will erect two 5-room cottages and one 2-story dwelling; frame; cost \$11,500.

Hospitals, Sanitariums, Etc.

Md., Baltimore.—Union Memorial Hospital, Saml. C. Rowland, Chrmn. Comm., Calvert Bldg., will erect hospital buildings on 33d St. between Calvert St. and Guilford Ave.; main entrance in central building about 30 ft. back of building line, approached by driveway and steps; first floor for offices, library, boardrooms, etc.; bedrooms and baths for internes and suite for resident physician at east end of first floor; superintendent's suite at opposite side; dining room in central building; 2 elevators in main structure; plans and specifications ready for estimates within 10 to 30 days; Jos. Evans Sperry, Archt., Calvert Bldg. (Previously noted.)

Okla., Bartlesville.—City, Ralph S. Cox, Chk., will erect hospital west of Delaware Ave. between 2d and 3d Sts.; bids until Apr. 23; plans and specifications at office of Walton Everman, Archt., and office of Mr. Cox. (Lately noted.)

Tenn., Bristol.—W. O. Came is Chrmn. of Bldg. Comm. to erect hospital. (Lately noted.)

Hotels.

Ark., El Dorado.—W. J. Rutherford and associates, New York city, are reported to erect 7-story hotel on Main St.; 220 rooms; J. Rice Scott, Archt., Greenville, Miss.

Fla., West Palm Beach.—South Florida Hotel Co., Inc., Chas. Kennedy, Prest., will erect \$500,000 hotel on Flagler Blvd.; 300 rooms; Geo. Fink, Archt., Miami. (Previously noted.)

La., New Orleans.—Orleans Hotel & Realty Co., John E. Boudreaux, Prest., will remodel Y. M. C. A. for hotel.

La., New Orleans.—Catholic Women's Club will convert Medical Bldg., on Baronne St. near Canal St., into hotel; 5 stories; install plumbing.

Tex., Mexia.—Mexia Hotel Co., John Sweat, Prest., will erect Halson Hotel; 6 stories and basement; fireproof; steel and ornamental brick; cost \$350,000.

W. Va., Welch.—S. E. Carter will erect hotel; 100 rooms; stores on first floor.

Miscellaneous.

Fla., Daytona.—Locker-room.—Daytona Golf and Country Club, S. B. Crosby, Secy., will erect locker-room; 5x12 ft.; hollow tile; showers and steel lockers.

Fla., St. Petersburg.—Dance Hall.—P. A. Turner will erect dance hall at Second Ave. and 9th St.; H. E. Wendell, Archt., La Plaza Theater Bldg.

Mo., Kansas City.—Clubhouse.—Kansas City Athletic Club, Robt. Gillham Rd. at 33d St., will rebuild clubhouse noted burned at loss of \$10,000.

N. C., Asheville.—Music Hall.—H. A. Dunham will construct addition to building on Pack Sq. for music hall.

N. C., Charlotte.—Exposition.—A. W. Burch and others are interested in organization of \$150,000 stock company to erect exposition building; 100,000 sq. ft. floor space.

N. C., Raleigh.—Clubhouse.—Carolina Country Club, A. L. Baker, Prest., will erect clubhouse to replace lately noted burned structure; hollow tile, building block or stucco exterior; tile roof; hardwood and Georgia pine; vapor heat; cost \$35,000. (Lately noted.)

Okla., Oklahoma City.—Clubhouse and Bank.—Oklahoma Club and Farmers National Bank will erect \$400,000 building; 85x140 ft.; 5 stories; reinforced concrete, hollow fireproof tile; brick and stone; composition roof; concrete, marble, tile and hardwood floors;

interior tile; metal doors; ventilators; vault lights; mail chutes; wire glass; vaults; low pressure steam heat; 2 passenger and 1 freight electric elevators. Address Hawk & Parr, Archts.

S. C., York.—Orphanage.—Church Home Orphanage will erect several buildings; cost \$20,000.

Tex., San Antonio.—Exposition.—International Exposition and Livestock Assn. will erect exposition halls, agricultural palaces, sales and show rings for livestock, race track and amusement buildings; tentative plans by Atlee B. and Robt. M. Ayres.

Railway Stations, Sheds, Etc.

Ark., De Witt.—St. Louis-Southwestern R. R. A. A. Matthews, Ch. Engr., Tyler, Tex., will erect passenger and freight depot; 200 ft. long.

Schools.

Ala., Albany.—City, E. C. Payne, Mayor, plans vote on \$300,000 bonds to erect high school, purchase additional playgrounds, etc. (Previously noted planning \$200,000 bond issue.)

Ala., Haleyville.—School Board will erect 3-story annex; brick; slate roof; hardwood floors; metal ceilings; steel sash and trim; wire glass; ventilators. (Lately noted.)

Ark., Arkansas City.—Board of Education, C. E. St. John, Supt. of Schools, will erect high school; 2 stories and basement; brick and stone; T. W. Williamson & Co., Archts., Central National Bank Bldg., Topeka, Kans.

Fla., Bradenton.—Manatee County Board of Public Instruction will erect \$100,000 school; 2 stories; 200x90 ft.; brick or hollow tile; composition roof; wood floors; electric lights; \$105,000 bonds voted. Address B. D. Gullett, (Lately noted.)

Fla., Pensacola.—Board of Public Instruction will erect 6-room school on E Blount St. and 14th Ave.; also 4-room building at East Pensacola Heights; bids opened May 21 for both structures.

Fla., Tampa.—County Board of Public Instruction, J. E. Knight, Supt., authorized election on \$12,000 bonds in Dist. No. 19 to repair school; also on \$70,000 bonds in Dist. No. 45 to erect, repair and enlarge schools.

Fla., Vero.—Special School Tax Dist. No. 11 voted \$30,000 bonds to erect addition to school. Address Dist. School Trustees. (Lately noted.)

Ga., Hartwell.—City, A. S. Richardson, Mayor, will receive bids until Apr. 28 to erect high school; 6 rooms; brick and hollow tile; wood floors; plans and specifications at office Emmett Skelton, Secy.-Treas., Hartwell; J. J. Baldwin, Archt., Anderson, S. C. (Lately noted.)

Ga., Rome.—Board of Education will erect school.

Ky., Chaplin.—Board of Education will erect \$12,000 school; 1 story.

Ky., Louisville.—St. Paul's Church, Rev. Eugene Donohoe, Pastor, 1022 S. Jackson St., will alter and erect addition to school; 2 stories; brick and stucco; Thos. J. Nolan, Archt., Courier-Journal Bldg.

Ky., Mayfield.—Board of Education, Harry J. Wright, Chrmn., will erect \$75,000 addition to high school; 3 stories; 120x60x36 ft.; brick; stone trim; wood floors; also erect \$15,000 colored grade school; 1 story and basement; 50x62 ft.; brick veneer; concrete foundation; W. E. Gore, Archt., Ten-Story Bldg., Paducah.

Ky., Richmond.—City Board of Education, J. G. Rayne, Supt., will erect school; 2 or 3 stories; brick; C. C. and E. A. Weber, Archts., Miller Bldg., Cincinnati.

La., Ida.—Caddo Parish School Board, Shreveport, called election May 24 in Dist. No. 4 on tax to erect high school.

La., Rayville.—Richland Point School Board will erect \$120,000 school; bids opened May 20. Address E. E. Keebler.

Md., Adamstown.—Frederick County Board of Education, G. Lloyd Palmer, Supt., Frederick, will erect high school. (Previously noted.)

Md., Emmitsburg.—Frederick County Board of Education, G. Lloyd Palmer, Supt., Frederick, will erect high schools at Emmitsburg and Kemptown. (Previously noted.)

Md., Walkersville.—Board of Education, G. Lloyd Palmer, Supt., Frederick, will receive bids until May 4 to erect high school, previously noted; bids same date for mechanical equipment, including heating, plumbing and electric wiring; plans and specifications at office Mr. Palmer. (See Machinery Wanted—Heating Plant; Plumbing; Electric Wiring.)

Mo., Delta.—Consolidated School Dist. No. 1 will erect \$12,000 school; 48x72 ft.; brick and frame; probably tar and gravel roof; hard-wood floors; metal ceilings; hot-air heat; bids opened May 2. Address J. E. Robinson.

Mo., Elsberry.—Elsberry Dist. School Board will erect \$45,000 school; 80x100 ft.; brick; composition roof; wood floors; steam heat; Martin J. Geise, Archt., Quincy, Ill. (Lately noted.)

Mo., Hume.—Board of Education, Charles Coleman, Secy., will erect \$25,000 school; brick; stone trim; composition roof; J. H. Felt & Co., Archts., Grand Avenue Temple Bldg., Kansas City.

Mo., Willard.—Board of Education, O. D. Gillespie, Clk., will receive bids until Apr. 30 to furnish labor and material to erect school; bids for building complete or separate bids for different parts as follows: Excavating, concrete work, brick work, iron work, sheet metal, stone, lumber, carpenter work, marble work, plastering, painting, wiring, heating and plumbing; plans include structure 53x88 ft.; brick and wood; pitch shingle roof; wood floors; hot-air or steam heat; electric lights; cost \$30,000; plans and specifications at office Geo. F. Reed, Archt., Woodbury Bldg., Springfield. (Lately noted to open bids Apr. 14.)

N. C., Asheville.—St. Genevieve's of the Pines will erect 4-story structure; 175x44 ft.; fireproof; brick; hollow-tile partitions; Smith & Carrier, Archts. (Previously noted.)

N. C., Lenoir.—City voted \$150,000 to erect graded school. Address School Board. (Lately noted.)

N. C., Lumberton.—Lumberton School Dist. will not erect high school as lately reported.

Okla., Boynton.—County Board of Education, H. P. Battles, Supt. of Schools, Muskogee, will erect \$60,000 high school; also erect several additions; Monnot & Reid, Archts., Muskogee National Bank Bldg., Muskogee, and Oklahoma City. (Lately noted.)

Okla., Eufaula.—County Board of Education, H. P. Battles, Supt. of Schools, Muskogee, will erect \$65,000 high school; also erect addition to several schools; Monnot & Reid, Archts., Muskogee National Bank Bldg., Muskogee, and Oklahoma City.

Okla., Goodwell.—Goodwell School District voted \$38,500 bonds to erect school.

Okla., Slick.—School Board will erect school building; \$100,000; bonds voted.

S. C., Abbeville.—Board of School Trustees, W. M. Barnwell, Chrmn., will erect high school; cost \$70,000; architect not selected. (Lately noted.)

S. C., McClellanville.—Board of School Trustees, W. H. Graham, Secy., will receive bids at office Benson & Barbot, Archts.,

Charleston, S. C., until Apr. 27 to erect two-story brick school; owner will furnish brick and rough lumber; plans and specifications at office architects.

Tenn., Athens.—McMinn County is reported to vote June 4 on \$300,000 school bonds. Address County Board of Education.

Tenn., Jasper.—Marion County Board of Education, D. A. Tate, Supt., South Pittsburg, will erect \$50,000 school; Chas. E. Bearden, Archt., First National Bank Bldg., Chattanooga.

Tenn., Richard City.—Marion County Board of Education, D. A. Tate, Supt., South Pittsburg, will erect \$25,000 addition to school; Chas. E. Bearden, Archt., First National Bank Bldg., Chattanooga.

Tenn., South Pittsburg.—Marion County Board of Education, D. A. Tate, Supt., will erect \$75,000 school, also erect \$20,000 to \$25,000 colored high school; receiving bids for latter.

Tex., Brownsville.—Brownsville Independent School Dist. voted \$175,000 to erect high school. Address Dist. School Trustees.

Tex., Eastland.—Eastland Independent School Dist. votes May 5 on \$50,000 bonds to erect and repair schools. Address Dist. School Trustees.

Tex., Ladonia.—City plans vote on \$50,000 bonds to erect high school. Address Board of Education.

Tex., Lewisville.—School Board will erect \$40,000 school; 90x75 ft.; brick and concrete; metal ceilings; wood and concrete floors; rubber or asbestos roof; plaster board; rolling partitions; wire glass; steel sash and trim; ventilators; C. H. Leinbach, Archt., Dallas. (Lately noted.)

Tex., Odell.—School Board, Theo. Collins, Prest., will receive bids until May 2 to erect 2-story brick school; fireproof floors and partitions; plans and specifications at office Theo. Collins, Odell; R. H. Stuckey, Archt., Chillicothe.

Tex., Palestine.—City School Board, Bonner Frizzell, Supt. of Schools, will erect brick auditorium to seat 100, addition to grammar school for junior high school; also erect \$75,000 to \$100,000 high school to replace Lincoln High School lately noted burned; 12 rooms; brick and hollow fireproof tile; composition roof; concrete and hardwood floors; rolling partitions; metal ceiling; probably steam heat; C. H. Leinbach, probable Archt.; election May 14 on \$115,000 bonds. (Lately noted in part.)

Tex., San Antonio.—Westmoorland College, Dr. Felix R. Hill, Prest., will erect administration building, science building and dormitory; also plans other structures later; total cost \$500,000.

Tex., Taft.—Taft Ranch Co., Jos. F. Green, V.-P., will erect school; 14 rooms; reinforced concrete; bids opened Apr. 25.

Tex., West.—West School Dist. will vote May 13 on \$50,000 bonds to erect high school. Address District School Trustees.

W. Va., Fort Spring.—Fort Spring District Board of Education, E. C. Baker, Secy., Roncerverte, will receive bids until May 21 to remodel and erect addition to school building; plans and specifications at office Mr. Baker; H. Rus Warne, Archt., Charles-ton, W. Va.

W. Va., Keystone.—Brown's Creek Dist. Board of Education, L. J. Hanifan, Supt. of Schools, Welch, will erect school for colored pupils.

Stores.

D. C., Washington.—Allan E. Walker Investment Co. will erect \$300,000 store and office building. (See Bank and Offices.)

Fla., Kissimmee.—J. R. Gilbert will erect store on Main St.

Fla., Sebring.—P. L. Vinson will erect 2-story brick block.

Fla., St. Petersburg.—Joe Solomon will erect business building on North 9th St.; 2 stories; concrete block and frame; first floor, 4 store-rooms; second floor, apartments; cost \$35,000; H. E. Wendell, Archt.

Ky., Louisville.—Starks Realty Co., I. F. Starks, Prest., Starks Bldg., will expend \$20,000 to remodel storeroom at 4th and Walnut Sts.; Graham, Probst & White, Archts., 80 E. Jackson Bldg., Chicago.

Ky., Winchester.—T. C. Rawlin will erect store; 2 stories and basement; 22x100 ft.; brick; stone trim; J. W. Crone, Archt., Brown Proctoria Bldg.

La., Shreveport.—T. K. Giddens will erect 2-story frame building at Marshall and Milam Sts.

Mo., Kansas City.—Sephonia Realty Corp. will remodel 3-story and basement store and loft building at 17th and Main Sts.; 50x133.6 ft.; brick; composition roof; concrete and wood floors; metal ceilings; gravity steam heat; electric lights; freight elevator; Geo. Carman, Archt., 1332 Grand Ave. (Lately noted.)

N. C., Asheville.—Leader Department Store will expend \$40,000 for improvements to building, to include store front, plate-glass windows, elevator, fixtures, etc.

N. C., Junaluska.—Junaluska Supply Co. will erect store building and garage; brick; also erect woodworking shop.

S. C., Lando.—Manetto Mills will erect 3-story store.

S. C., Richburg.—Dr. Septimus Jordan will erect building to replace structure lately noted burned.

Va., Galax.—L. J. Jones will erect brick business building.

Va., Richmond.—Henry Levy will erect store and flat building at 120 W. Marshall St.; brick; cost \$12,000.

Va., Richmond.—A. W. Patterson will erect 2 brick stores, 2913-25 W. Cary St.; cost \$14,000.

Va., Richmond.—John A. Belvin Estate will expend \$12,000 to repair store buildings, 17 and 23 N. 12th St.

W. Va., Keystone.—Dr. Bridgeford will erect \$20,000 store and apartment building; 2 stories and basement; 30x70 ft.; brick and limestone; Martin J. Garry and Robt. A. Sheffey, Archts., Bluefield; day labor.

W. Va., Princeton.—J. C. Carter will erect 3-story brick store and flat building at 2d and Mercer Sts.

Theaters.

Ky., Ludlow.—Harry R. Hilling, Belmont St. and Dixie Highway, Fort Mitchell, will erect moving-picture theater; 1 story and basement; 31x125 ft.; brick; Howard McCleore, Archt., Fourth National Bank Bldg., Cincinnati.

Ky., Middlesboro.—Brown Amusement Co. will erect theater, store and office building; 3 stories and basement; brick and concrete; stone trim; reinforced concrete floor and roof construction; C. C. and E. A. Weber, Archts., Miller Bldg., Cincinnati.

Mo., Columbia.—J. A. Stewart plans to erect theater.

N. C., Shelby.—E. L. & Z. Beam will erect \$50,000 theater; 50x200 ft.; tile, concrete and maple floors; steam or low-pressure heat; electric lights; Louis H. Asbury, Archt., Charlotte; day labor. Address owners.

Ola., Pauls Valley.—Victory Theater will erect building; seating capacity, 455; cost \$15,000.

Stores.

Ala., Birmingham.—J. M. Hayes and Claude Guttry will erect brick and steel building to contain 3 stores; 40x140 ft.; 1½ stories; plate-glass front; cost \$35,000; E. F. Hetrick Engineering Co., Contr.

Ala., Gadsden.—Joe S. Moragne will erect store on Broad St.; 42x125 ft.; brick; J. S. Johnson, Contr. (Lately noted.)

Fla., Miami.—P. J. Davis has contract to erect 1-story concrete block at Tamiami Trail and Citrus Drive; 60x82 ft.; contain 3 stores; tile trim; plate-glass windows; reinforced concrete columns and girders.

Fla., Tampa.—Maas Bros. will expend \$100,000 to remodel and connect four floors of adjoining building for store purposes; reinforced concrete floors; steel trussed roof; Geo. A. Miller, Contr.

Ga., Atlanta.—Gude & Co. have contract to erect 3-story building at Spring and Poplar Sts.; cost \$25,000.

Md., Baltimore.—American Theater Corp., Equitable Bldg., will erect Boulevard Theater on 33d St. near Boulevard; 78x198 ft.; fireproof; hollow tile; ornamental terra-cotta; interior tile; concrete roof; concrete floors; steel sash and trim; metal doors;

ventilators; cost \$200,000; E. G. Blanke, Archt., 532 N. Calvert St.; E. Eyring & Sons, Contrs., 3d St. and Faust Ave. (Lately noted.)

S. C., Greenville.—Mrs. A. C. Ferguson will erect \$12,000 store and apartment building on Pendleton St.; 2 stories and basement; 26x80 ft.; brick; Ryno & Brackney, Archts., Henson Bldg., Knoxville, Tenn.; Jamison & Morris, Contrs., Greenville. (Lately noted.)

Tex., Waco.—Miller Produce Co. will erect \$12,000 building, Mary and 5th Sts.; 50x75 ft., exclusive of loading platforms; Birch D. Easterwood, Archt.; Gross & Swiggert, Contrs.

Va., Hopewell.—Elder Drug Co. will erect store and office building; 2 stories; 75x19 ft.; brick; tile floors; Barrett specification roof; plate-glass fronts; stoves; J. Z. Ruskins, Contr.

W. Va., Fairmont.—Allison S. Fleming, Box 502, will erect building; 4 stories; 25x120 ft.; brick or tile stuccoed; metal ceilings; composition roof; concrete and hardwood floors; safes; probably gas heat. Address Walter Ellason, Contr.

Theaters.

Ky., Corbin.—Corbin Hippodrome Co., Louis Morenbloom, Michael Sherman and others,

will erect \$65,000 vaudeville and moving-picture theater; 79x100 ft.; fireproof; concrete floors; glazed terra-cotta front; independent lighting and ventilating plant; install \$10,000 pipe organ; R. F. Graf & Sons, Archts., Knoxville, Tenn.; E. G. Holladay Co., Contr., Nashville; M. E. Mismar, plumbing; Acme Electric Co., electrical work, both Knoxville. (Lately noted.)

W. Va., Charleston.—Kanawha Investment Co. will erect \$200,000 theater and business building; 5 stories; 93x200 ft.; theater, fireproof; business part, composite; hollow fireproof tile; cement and hardwood floors; metal ceilings; plaster board; ornamental terra-cotta; interior tile; composition roof; metal doors; wire glass; vault lights; ventilators. Address Mills & Millspaugh Co., Archts.-Contrs., Columbus, O. (Lately noted.)

Warehouses.

N. C., Charlotte.—Alexander & Garsed, 18 E. 4th St., will erect \$37,000 brick and limestone office and warehouse at 3d and Cedar Sts.; 99x86 ft.; 2 stories; terra-cotta trim; 20,000 sq. ft. storage space; Robert & Co., Archts.; T. C. Thompson & Bro., Contrs. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Air Compressor.—Carl Hill, Altavista, Va.—Second-hand steam-driven air compressor to furnish 100 to 200 ft. air per minute; state condition, price, etc.

Belting.—Guyan Machine Shops, Logan, W. Va.—2 to 10-in. leather and rubber belting.

Boiler.—Western Sand & Gravel Co., Wichita Falls, Tex.—40 to 50 H. P. boiler.

Bailey (Paper).—John W. Stegall, 1410 Myrtle Ave., Jacksonville, Fla.—Paper bailey.

Bricks (Paving).—City Development Co., Grant Wywick, Secy.-Treas., Crystal Beach, Fla.—Paving bricks.

Bridge Construction.—Virginia State Highway Coms., 116 S. 3d St., Richmond, Va.—Bids until Apr. 25 to build 324-ft. steel bridge over Pamunkey River; specifications on file.

Bridge Construction.—Rapides Parish, J. F. Ball, Prest. Police Jury, Alexandria, La.—Bids until May 10 to grade, bridge and construct culverts on Section B of LeCompte-Red River road; plans, etc., with Parish Engr.

Bridge Construction.—Volusia County, Saml. D. Jordan, Clerk County Comms., De Land, Fla.—Bids until May 5 to erect steel highway drawbridge across intercoastal canal at Smith's Creek bridge; specifications, etc., on file.

Bridge Construction.—Duval County Commissioners, Chas. A. Clark, Chrmn., Jacksonville, Fla.—Bids until May 2 for wooden bridge over McGirt's Creek on New River-Maxville road; plans, etc., with Frank Brown, Clk.

Building Material.—Robt. Eisenschmidt, Minnaugh, Bldg., Columbia, S. C.—Catalogs from manufacturers of building material.

Building Materials.—City Development Co., Grant Wywick, Secy.-Treas., Crystal Beach, Fla.—Building materials, including rock clay, lumber, cement, concrete.

Building Material and Equipment.—H. A. Kelly, Tampa, Fla.—Building materials and equipment to construct \$2,500,000 film city.

Canning Plant.—Mail Order Fish Co., L. A. Toler, Mgr., Cedar Key, Fla.—Names and addresses of manufacturers of small canning outfit; daily capacity 100 to 150 doz. cans fish.

Cement.—See Building Materials.

Clevis (Plow).—W. J. Burnett, Thomasville, Ga.—To correspond with mfrs. of plow clevises.

Concrete.—See Building Materials.

Condenser (Surface or Jet).—George Trubel, care of Hugh E. Weightman, 21 N. La Salle St., Chicago, Ill.—Surface condenser preferred; will consider jet condenser.

Cylinder-grinding Machine.—Orleans Steel Products Co., 1025 Bienville St., New Orleans, La.—Power machine for grinding automobile cylinders.

Drainage.—Ollies Creek Drainage District No. 6, Cobb County Comms., Marietta, Ga.—Bids until Apr. 29 to construct 9 mi. drainage ditch; Will D. Alexander, Engr., 207 Monroe Rd., Charlotte, N. C.

Drainage.—Comms. of Alcovy River Drainage Dist. No. 2, Robt. L. and H. C. Cox, Attns., Monroe, Ga.—Bids until May 4 to construct ditch, consisting of 13 mi. on Alcovy River, ½ mi. on Flat Creek, 4½ mi. on Mountain Creek, 1½ mi. on Little Mountain Creek; total excavation 1,068,333 cu. yds.; Will D. Alexander, Engr., Charlotte, N. C.

Drainage, etc.—Stanberry Drainage Dist., C. L. Moseley, Prest., Stanberry, Mo.—Bids until Apr. 26 to construct main ditch, laterals and dam; total excavation 286,200 cu. yds.; Clark E. Jacoby Engineering Co., Engr., 527 Shukert Bldg., Kansas City, Mo.

Dredging Machinery.—City Development Co., Grant Wywick, Secy.-Treas., Crystal Beach, Fla.—Dredging machinery.

Drill.—Orleans Steel Products Co., 1025 Bienville St., New Orleans, La.—30-in. radial power drill.

Drill Tower.—Board of Awards, Wm. F. Breining, Prest., Baltimore, Md.—Bids until May 4; drill tower for use of Fire Dept., No. 3; Engine-house, Edmondson Ave. and Benétalou St.; H. G. Perring, Ch. Engr.

Electric Wiring.—Board of Education, G. Lloyd Palmer, Supt., Frederick, Md.—Bids until May 4 to install electric wiring in high school.

Electrical Equipment.—Standard Electric Machinery Co., 9 S. Hill St., Baltimore, Md.—Prices on motor generator set, 100 K. W. to

200 K. W. capacity, generator direct connected, 250 volts; 3-phase 60-cycle 2200-volt synchronous motor; common C. I. bedplate; starting apparatus and panel; D. C. generator panel; specify if 2, 3 or 4 bearings; state full information, etc.

Electric Machinery.—City Development Co., Grant Wywick, Secy.-Treas., Crystal Beach, Fla.—Machinery for electric-light and ice-making plant.

Electric Transmission Line, etc.—Raven Coal Co., Chas. F. Carter, Lancaster, Mo.—Data and prices on constructing 20 mi. transmission line, transformers, meters, etc.

Fertilizer Plant.—Mail Order Fish Co., L. A. Toler, Mgr., Cedar Key, Fla.—Names and addresses manufacturers of fish scrap and fertilizer plants; daily capacity from 1 to 2 tons raw material.

Fire Equipment.—Guyan Machine Shops, Logan, W. Va.—Fire-fighting equipment for private fire line.

Flooring.—Newport Contracting & Engineering Co., Newport News, Va.—145,000 ft. 1x3 factory maple or edge grain short-leaf pine flooring; also 100,000 lin. ft. 2x4, beveled two sides, ½-in. bevel, sound and square edge sides; f. o. b. Philadelphia, Pa.

Generator.—See Electrical Equipment.

Generator, etc.—George Trubel, care of Hugh E. Weightman, 21 N. La Salle St., Chicago, Ill.—500 K. W. 3-phase, 60-cycle 440-volt mixed pressure turbo-generator, using steam at 1-lb. gauge, supplemented by live steam at 150 lbs. pressure; no superheat; 28-in. vacuum; prefer excited direct connected; also switchboard.

Generators, etc.—Navy Dept., Bureau of Yards and Docks, Washington, D. C.—Bids until May 11 to furnish and install turbo-generators and motor-generator set and switchboard in central power plant, and furnish step-down substation equipment at Naval Experimental and Research Laboratory, Washington (Bellevue); Spec. 4317; information on application.

Glass-beveling Equipment, etc.—Burdiss Paint & Glass Co., 203 N. Morton Ave., Okmulgee, Okla.—Roughing and emery wheel with sand box, roughing plate and sand hopper for beveling plate glass; also upright smoother, complete.

Grease (Transmission and Cup).—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Apr. 25 to furnish 7500 lbs. transmission grease and 5000 lbs. cup grease; delivery Naval Base, Hampton Roads, Va.; Sch. 432.

Hangars.—Constructing Quartermaster, Aberdeen Proving Ground, Md.—Bids until May 6 for wrecking 4 steel A. E. F. hangars at Roosevelt Field, Long Island, N. Y.; shipping, re-erecting and finishing complete 2 hangars at Aberdeen Proving Grounds, Md.; one at Brooks Field, San Antonio, Tex.; ship remaining one to Commanding Officer Air Intermediate Depot, f. o. b. cars Fairfield, O.; plans on file.

Heating Plant.—Board of Education, G. Lloyd Palmer, Supt., Frederick, Md.—Bids until May 4 to install heating plant in high school.

Ice-cream Machinery.—D. L. Hoddsen, Room 322 Norfolk Southern R. R., Norfolk, Va.—Names and addresses manufacturers of ice-cream plant machinery.

Ice Plant.—J. D. Humphrey, Huntsville, Ala.—Data and prices on 50 to 100-ton capacity ice plant.

Ice Plant.—D. L. Hoddsen, Room 322 Norfolk Southern R. R., Norfolk, Va.—Names and addresses manufacturers of ice-plant machinery.

Lath (Metal).—Guyan Machine Shops, Logan, W. Va.—Metal lath.

Locomotive.—Texas Stone Products Co., Dallas, Tex.—20 to 30-ton saddle-back locomotive.

Lumber.—See Building Materials.

Machine-shop Equipment.—Guyan Machine Shops, Logan, W. Va.—Steel lockers, tool cribs, steel bins for bolts, nuts and other supplies.

Milking Machines.—West Florida Ice Cream & Dairy Co., W. P. Sondemp, Secy.-Treas., Marianna, Fla.—Data and prices on milking machines.

Mining Machinery.—John W. Feldman, 3 Hamilton Row, Hagerstown, Md.—To correspond with manufacturers of machinery for grinding feldspar and mica, also talc and soapstone; immediate delivery.

Miscellaneous Supplies.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until May 5 to furnish: Carbon steel, copper wire, brass tubing, valves, pipe fittings, transmitter mouth-pieces, rubber force cups, lamp guards, rubber flush-tank balls, barium sulphate, pig-iron, rubber daters, wrapping paper, tires and tubes. Blank forms and information (Circular 1447) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, Fort Mason, San Francisco; United States Engr. offices throughout country.

Mixer (Concrete).—Pritchard-Raines-Hazlehurst Construction Co., 1001 Savannah Bank & Trust Co., Savannah, Ga.—Prices on concrete mixer.

Motor.—See Electrical Equipment.

Motor.—See Pump, Motor, etc.

Oils and Greases.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until May 20 to furnish: Mineral steam cylinder oil, marine engine oil, car oil, class A medium lubricating oil, class C heavy and extra heavy lubricating oil, cup greases, gear, chain and wire rope lubricant, cotton waste. Blank forms and information (Circular 1446) on application to offices of Panama Canal; Asst. Purchasing Agents at New York, New Orleans, Fort Mason and San Francisco; United States Engr. offices throughout country.

Paving.—Board of Awards, Baltimore, Md.

Bids until May 4 to grade and pave alleys in Contracts 71 and 72; cement concrete; specifications, etc., at City Hall.

Paving.—City, Paul W. Jones, Recorder, Welch, W. Va.—Bids until May 3 to grade and pave Mercer, Ash, Beech and other streets; plans, etc., with L. A. Osborn, City Engr.

Paving Brick.—Charles E. Hillyer, Engr. Contr., 117 W. Forsyth St., Box 371, Jacksonville, Fla.—Prices on 280,000 vitrified paving brick.

Paving.—City Commrs., T. L. Hart, Secy. Commrs., Fayetteville, Ark.—Bids until May 12 to construct 25,000 sq. yds. asphaltic macadam pavement, 8000 lin. ft. concrete curbing, 34,000 sq. ft. concrete gutter, etc.; plans, etc., on file and with E. M. Ratliff, Engr.

Paving.—Town, W. S. Crawford, Mayor, Mebane, N. C.—Bids until Apr. 28 to improve streets; \$155,000 available; W. M. Piatt, Engr., Durham, N. C.

Paving.—Town, C. D. Strickland, Mayor, Kentwood, La.—Bids until May 10 to construct 4 mi. concrete sidewalk; plans, etc., with Town Clerk.

Paving.—District Commrs., Room 509 District Bldg., Washington, D. C.—Bids until May 16 to pave streets and avenues; sheet asphalt; specifications, etc., from Ch. Clk. Engr. Dept., 427 District Bldg.

Paving.—City, M. C. Ayres, City Clk., Mt. Sterling, Ky.—Bids until May 3 to construct streets; vitrified brick, asphalt, tarvia or bitulithic with concrete foundation, etc.; 9200 sq. yds. paving; 7100 ft. curb and gutter; plans, etc., on file.

Pharmaceutical and Toilet Products Machinery.—Heywood Toilet Specialties Co., Loren C. Sage, Secy.-Treas., 305 N. Robinson St., Oklahoma City, Okla.—Prices and catalogs on machinery to manufacture toilet articles and pharmaceutical products.

Pipe, etc.—Kosmos Portland Cement Co., Louisville, Ky.—800 ft. 14-in. cast-iron flanged pipe; 14 and 16-in. flexible rubber pipe; one 15-in. flanged valve; two 14-in. gate valves; 14-in. tee; three 14-in. ells; 14 to 16-in. reducer.

Plumbing.—Board of Education, G. Lloyd Palmer, Supt., Frederick, Md.—Bids until May 4 to install plumbing in high school.

Preparation Plant.—Virginia Anthracite Coal Corp., F. J. Hargrave, Secy., Pulaski, Va.—Prices on preparation plant for coal mine.

Presses (Printing).—John W. Stegall, 1410 Myrtle Ave., Jacksonville, Fla.—Catalogs on hand-power printing presses.

Pump.—Pritchard-Raines-Hazlehurst Construction Co., 1001 Savannah Bank & Trust Co., Savannah, Ga.—Prices on pump.

Pump, Motor, etc.—Kosmos Portland Cement Co., Louisville, Ky.—Centrifugal pump, motor and base, direct connected, capacity 4000 G. P. M. against 150-ft. head.

Reinforcing Wire.—W. C. Austin, Anderson, S. C.—Prices on reinforcing wire for concrete pipe.

Road Construction.—Rapides Parish, J. F. Ball, Prest. Police Jury, Alexandria, La.—Bids until May 10 to grade 4½ mi. Lecompte Red River road; plans, etc., with Parish Engr.

Road Construction.—Wharton County, J. P. Taylor, County Auditor, Wharton, Tex.—Bids until May 2 to improve Louise-Hahn-Taiton road; plans, etc., with Nagle-Witt-Rollins Engineering Co., Engrs.

Road Construction.—Sumter County, E. F. Allison, Prest. Board of Revenue, Livingston, Ala.—Bids until May 18 to construct 17½ mi. hard-surface road; W. S. Keller, State Highway Engr., Montgomery, Ala.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until May 2 to construct 4.84 mi. State road from Freeburg; State-aid Project S-20.27; \$6,471.01; plans, etc., with County Clerk, Linn, Mo.; H. D. Griffith, Div. Engr., De Soto, Mo., and State Highway Dept., Jefferson City, Mo.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until May 30 to construct 15.09 mi. Greenville-Poplar Bluff road; Federal-aid Project 59, Section A; gravel pavement; \$224,294.47; 4 mi. Greenville-Poplar Bluff road, concrete pavement; \$21,458.86; plans, etc., with County Clerk, Poplar Bluff; M. S. Murray, Div. Engr., Sikeston, Mo., and State Highway Dept., Jefferson City, Mo.

Road Construction.—State Highway Board, Jefferson City, Mo.—Bids until May 4 to construct 6.26 mi. State road from Albany; Project 57, Section A; \$114,848.21; plans, etc., with County Clerk, in office Div. Engr., A. C. Lingley, St. Joseph, Mo., and State Highway Dept., Jefferson City, Mo.

Road Construction.—State Highway Board, Jefferson City, Mo.—Bids until May 3 to construct 2.27 mi. State road from Coon Creek; Federal-aid Project No. 70; gravel pavement; \$12,793.04; 1.83 mi. State road from Coon Creek; Federal-aid Project No. 71; \$14,986.62; both Taney County; plans, etc., with County Clerk, Forsyth; H. P. Moberly, Div. Engr., Springfield, Mo., and State Highway Dept., Jefferson City, Mo.

Road Construction.—Marion County Commissioners, Alex. Purdy, County Road Engr., Moundsville, W. Va.—Bids until May 8 to grade and construct pavement on 1 mi. Boothsville road in Grant Dist. and 1 mi. Teverbaugh road in Lincoln Dist.; plans, etc., with County Clerk and B. H. Palmer and S. B. Miller, Dist. Roads Engrs.

Road Construction.—Marshall County Commissioners, Alex. Purdy, County Road Engr., Moundsville, W. Va.—Bids until May 3 to hard surface 1 mi. road in Clay Dist.; brick on concrete base; concrete curb and gutter.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until May 5 to construct 3.91 mi. State-aid Project S-20.30; \$21,161.60; plans, etc., with County Clerk, Bowling Green; M. J. Harrick, Div. Engr., Macon, Mo., and State Highway Dept., Jefferson City, Mo.

Road Construction.—Highway Comrs., Union Township, E. W. Stone, Secy., Union, S. C.—Bids until Apr. 28 to resurface 2.4 mi. Union-Buffalo and .5 mi. Union-Monarch roads; specifications from County Engrs.

Road Construction.—State Highway Dept., of Georgia, Atlanta, Ga.—Bids until Apr. 28 to construct 7,859 mi. highway from Jasper to Cherokee County line; clay-bound macadam; Federal-aid Project 119; plans, etc., with Comrs. Roads and Revenues, Jasper; State Highway Dept., Walton Bldg., Atlanta, Ga., and Div. Engr., Blue Ridge, Ga.

Rock Clay.—See Building Materials.

Rolling Partitions.—W. C. Austin, Anderson, S. C.—Prices on rolling partitions.

Rolls (Crushing).—Kosmos Portland Cement Co., Louisville, Ky.—Set crushing rolls, 24-in. diam. by 30-in. length.

Sash (Steel).—Guyan Machine Shops, Logan, W. Va.—Steel sash.

Saw.—Orleans Products Co., 1025 Bienville St., New Orleans, La.—Wood jig saw.

Sawmill.—Updegraff Lumber Co., Manatee, Fla.—Portable sawmill.

Sewers.—District Commrs., Washington, D. C.—Bids until Apr. 22 to construct house drainage and sewerage of psychopathic group, Gallinger Municipal Hospital; plans, etc., from Chief Clerk Engineering Dept., District Bldg.

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Sewers.—City of Birmingham, Ala., Julian Kendrick, City Engr.—Bids until Apr. 26 to construct sanitary sewers (Improvement Ordinance No. 86); plans, etc., on file.

Sewers.—City of Miami, Fla.—Bids until May 19 to construct 8½ mi. 8 to 24-in. terra-cotta pipe sanitary sewers; plans, etc., from Chas. W. Murray, City Engr.

Sewers.—Mayor Wm. F. Broening, Pres., Board of Awards, Baltimore, Md.—Bids until May 4 to construct 6500 lin. ft. 8 to 10-in. lateral sewers, 2330 lin. ft. house connections, 500 lin. ft. underdrain and 25 manholes in Dist. No. 12-A, Sanitary Contract No. 180; plans, etc., from A. E. Christhill, Highways Engr.

Sewers.—City of Welch, W. Va., Paul W. Jones, Recorder.—Bids until May 3 to install sewers in Mercer St. from Court to Ash Sts.; Beech St. from Woodmont Addition to Elkhorn Addition; Hobart St. from North Highland Addition to city; plans, etc., from L. A. Osborn, City Engr.

Shafting.—Guyan Machine Shops, Logan, W. Va.—Shafting, all sizes, up to 4 7-16 in.

Shears.—Guyan Machine Shops, Logan, W. Va.—Squaring shears, 48-in. capacity, 18-gauge.

Sheet Metal.—W. C. Austin, Anderson, S. C.—Prices on Black sheet metal; 1', 16 and 12-gauge.

Shoelace Machines.—Roger S. Searholz, 6822 Clearview St., Germantown, Philadelphia, Pa.—Names and addresses manufacturers of shoelace machines.

Sluice Gates.—Water Dept., William F. Broening, Pres., Board of Awards, Baltimore, Md.—Bids until May 4 to furnish and deliver sluice gates for Loch Raven Dam, Contract No. 50; Wm. A. Megraw, Water Engr.

Steel, Brass, etc.—Guyan Machine Shops, Logan, W. Va.—Reinforcing steel; round brass and bronze ¼ to 2-in. round.

Switchboard.—See Generator, etc.

Tanks.—City Development Co., Grant Wyrick, Secy.-Treas., Crystal Beach, Fla.—Water tanks and septic tanks.

Tank (Steel or Wood).—Hackley-Morrison Co., 16½ N. 9th St., Richmond, Va.—Steel or wood tank, 5000-gal. capacity.

Tile (Sewer).—City Development Co., Grant Wyrick, Secy.-Treas., Crystal Beach, Fla.—Sewer tile.

Timber Tract.—Sam'l. Brown, St. James Hotel, Philadelphia, Pa.—To purchase 30,000 acres hardwood timber tract; erect 2 band mills.

Tractors.—City Development Co., Grant Wyrick, Secy.-Treas., Crystal Beach, Fla.—Tractors.

Transmission Equipment.—Guyan Machine Shops, Logan, W. Va.—Hangers, pulleys and boxes.

Valves.—See Pipe, etc.

Ventilating (Coal Mine) Equipment.—Virginia Anthracite Coal Corp., F. J. Hargrave, Secy., Pulaski, Va.—Prices on coal mine ventilating equipment.

Water-power Equipment.—C. H. Barlow, Smithfield, Va.—Names and addresses manufacturers water-power equipment for isolated electric-light plants for farmer.

Woodworking Machinery.—Updegraff Lumber Co., Manatee, Fla.—Jointer, post borer, sander and tenoning machines.

Water-works.—City of Florence, S. C., H. K. Gilbert, Mayor.—Bids until May 2 to construct 5200 ft. 6-in. cast-iron water mains with fittings; plans, etc., with Adams & Ervin, Civil Engrs.

Water-works.—City of Norfolk, Va., Walter H. Taylor 3d, Director of Public Works. Bids until May 4 to construct concrete water drains in Smith's Creek; 1000 lin. ft. monolithic or precast double 4x6-ft. drain and 500 lin. ft. precast or monolithic double 4x6-ft. reinforced concrete drain; all on pile foundation; plans, etc., on file; David A. Decker, Water and Sewers Engr.

Railroad Construction

Railways.

W. Va.—Bluefield.—Walton Sudduth of Bluefield has been awarded a contract to build 6 mi. of standard-gauge railroad along Swords Creek, in Russell County, Va., to replace a narrow-gauge road serving coal mines.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Change of Business Connection.

J. E. Tracy, general sales manager of the Sterling Motor Truck Co., Milwaukee, Wis., for the last four years, became actively connected on April 1 with the Hicks-Parrett Tractor Co., Chicago Heights, Ill., as vice-president and director of sales. Before his next previous business connection Mr. Tracy was with the Milwaukee Corrugating Co. for ten years in charge of sales. He also led in organizing the National Association of Motor Truck Sales Managers and was its first president.

Through Bills of Lading, Etc.

The Pacific Mail Steamship Co. has made arrangements with the Halschaw Steamship Lines, Inc., and also with the Old Dominion Steamship Co., for offering through bills of lading on shipments from New York to Central America, Los Angeles and San Francisco via Pacific Mail steamers. It is also announced that the Pacific Mail Steamship Co.

will this summer conduct regular passenger service in addition to its regular freight service between Baltimore, Central American ports and San Francisco, the four freighters being supplemented by sailings from Baltimore of the 535-foot passenger and cargo liners allocated by the Shipping Board to the company's transpacific service, as well as by the freighters assigned to its Around-the-World service. The Halschaw Line has a sailing from New York for Baltimore every Wednesday, and the Old Dominion Line from New York every Monday, Wednesday and Saturday for Norfolk, which is a port of call on the Pacific Mail service, the sailing schedule being every ten days from Baltimore.

Again With the Hayward Company.

After an interval of two years, during which he was general sales manager for the Ohio Locomotive Crane Co., H. M. Davidson has again become associated with the Hayward Company, 50 and 52 Church St., New York,

manufacturers of orange peel, clam shell, electric motor clam shell, and drag scraper buckets. He will hereafter be connected with the management of the company and, among other duties, will have general management of sales. Mr. Davidson's previous connection with the Hayward Company was from 1903 to 1919.

Now Contracting Engineer.

Victor T. Goggin, late New England sales manager of Fred. T. Ley & Co., Inc., of Springfield, Boston and New York, has left that concern to associate himself as contracting engineer with Dwight P. Robinson & Co., Inc., of New York, Chicago, Dallas, Youngstown, Los Angeles and Montreal.

Manager of Sales.

Russell B. Reid, for the last several years with the Edward R. Ladew Company as assistant sales manager, has been made manager of sales for the Sharon Pressed Steel Co. of Sharon, Pa., manufacturers of motor car frames, industrial trucks and pressed steel automobile parts. Mr. Reid will direct the sales of the company from the New York office at No. 66 Broadway.

Large Telephone Order Desk.

Joseph T. Ryerson & Son have installed some new telephone equipment at their general offices in Chicago, this consisting of a telephone order table with places for twelve men to receive orders and other communications relating to the steel service of the organization. Each man is equipped with a standard telephone head set and a set of keys. At one end of the table is a signal board. This office has fifty-two trunk lines with 150 individual telephones, all calls being received through a large switchboard. The operators immediately refer all calls for the city sales desk to the telephone order table, the city salesmen there being put instantly in communication with the customer. They are each equipped with specification and price books, besides looseleaf stock books that are corrected up to date, so that the men can answer questions without moving from their chairs. They also have by telephone immediate connection with the shipping department so that they can advise customers concerning delivery.

Trade Literature.

Construction of Asphalt Roads.

Brochure Number Thirteen of the Asphalt Association, 25 West 43d St., New York, contains "Suggestions for Asphalt Paving Contractors," an article written by Henry B. Drowne, division engineer with the Lane Construction Corporation, and covering 25 pages. The author presents detailed information about highway building so that contractors who have never had experience in this line of work may be posted concerning it and thereby be enabled to avoid failure. He says that highway work is one of the safest lines for contractors, but nothing more than a reasonable profit may be expected.

Map of Chattanooga.

A large general map of Chattanooga, Tennessee, and its environs, has been prepared and published by R. J. Shutting of that city. It is fully detailed with street names, etc., all very distinct so that they are easily legible. It is said that the population within the territory covered by the map is 102,000. Inside the city limits only it is 57,895. The map will be

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appreciated by business men and others interested in obtaining information about Chattanooga.

Iron and Steel Products.

The latest bulletin issued by the Lancaster Iron Works, Lancaster, Pa., presents illustrations and dimension tables of products manufactured at their plant, including steel-plate products, which comprise tanks of all descriptions, also chemical apparatus and special machinery and pipe. The company makes stacks, breechings, field storage tanks and all kinds of steel-plate work, which is erected by their own crews. The New York office is at 501 Fifth Ave.

Asphalt Pavements.

"Asphalt Base Pavements" is the heading on Brochure No. 12, issued by the Asphalt Association, 25 W. 43d St., New York, and it gives sundry instances of the extraordinary durability of such pavements under the heaviest kinds of traffic. A full-page picture shows Main St., Visalia, Cal., which, it is stated, was constructed with asphalt base pavement in 1894 and no maintenance work was done on it up to 1920, the city engineer saying that it continued in excellent condition. A number of facts about the methods of construction pursued in building such pavements are presented.

An Old Principle in This Mill.

The improved Griffin mill for pulverizing cement, rock, coal, ores, etc., is the subject of Catalog No. 45, issued by the Bradley Pulverizer Co., Allentown, Pa. It is stated that the principle on which the mill is founded was used by the Indians, who pulverized corn between two stones. In the mill this principle, it is observed, is carried to the highest state of perfection by a chilled iron roll hung on a control shaft and revolved against and around a steel die, the centrifugal force creating a pressure of about 15,000 pounds per square inch. The illustrations show completely the construction of the mill and its operation is fully described by the accompanying letterpress.

Office and Factory Supplies.

A "Catalog and Reference Book of Every-day Business and Factory Supplies for the Busy Business Man" is issued by L. F. Grammes & Sons, Allentown, Pa., where, it is stated, the firm has a manufacturing plant, including over 100,000 square feet of floor space and more than 11 acres, this having grown from a shop in one room only 10 feet square, established over forty years ago. There are very nearly 500 pages in the book, which is freely illustrated, showing the great variety of products found in stationery stores and comprising many articles of light hardware. Prices are given for every article.

Threading Tools.

Oster threading tools are fully explained and pictured in List 31-B of the Oster Manufacturing Co., Cleveland, Ohio. Features named include self-locking dies, self-locking guides, and, it is stated, there are no resetting, no loose bushings and no small parts. The dies are opened or closed by one movement of the hand and are held in place by a positive lever lock. The guides are adjusted by a slight turn of a small handle. Furthermore, it is noted that there are no weak parts liable to get out of order, and every wearing part is protected from dirt and chips. Dimension tables and price lists complete the folder.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Uses of Concrete.

The March-April number of The Concrete Builder issued by the Portland Cement Association, Ill., West Washington St., Chicago, contains a number of highly interesting articles, with illustrations, concerning different uses of concrete, the initial article describing and illustrating the concrete equipment of the Finley Farm Dairy, near Sherman, Texas. Sundry other instances of the use of concrete on farms and for dwellings, etc., convey suggestions which will be welcome to everyone contemplating either new buildings or improvements to old ones.

Road Builders' Machinery.

The Good Roads Machinery Co., Bulletin Bldg., Philadelphia, Pa., have issued a large folder showing their complete line of "everything for the road maker." The pictures display road rollers, rock crushers, car unloaders, screens, portable engines, portable bins, wheeled kettles, pressure distributors, corrugated metal culverts, elevators, etc.

Mechanical Stokers.

"Are Mechanical Stokers a Good Investment?" This query on the cover page of a book of 45 pages, issued by the American Engineering Co., Philadelphia, is answered in the affirmative by the contents of the publication, which is amply illustrated to display features, installations, etc. The installations are in many States, some of them in the South. Conclusive data is presented to show the great advantages of the stokers as considered from the viewpoint of economy, for which they are responsible. The book is handsomely prepared and finely printed on heavy, artistic paper. Everyone interested in obtaining the best results from operation will find matter of value in the work.

Machinery.

A 32-page booklet, entitled "A Trip Through the Plant of the Wayne Machinery Co., Fort Wayne, Indiana," tells the story of this establishment, which has been aptly called a "clearing-house" for woodworking machinery, machine shop and metal-working tools. Some of the output is new; some is rebuilt, but all of it is gone over by the company's experienced mechanics, and it is seen that it is in complete operating condition to give the best service before it is sent out. That is the emphatic assertion made. The main building of the plant, 256 by 60 feet, with two stories and a basement, affords an adequate idea of the dimensions of the business and of its success. There are two branch stores—one at Louisville, Ky.; another at Dayton, O. There are many illustrations in the booklet displaying different machines and an abundance of reading matter tells all about them. The form of presentation makes the contents very interesting.

OBITUARY.

H. K. Porter.

H. Kirke Porter, president of the H. K. Porter Company, locomotive builders, Pittsburgh, Pa., died on April 10 at his residence, 1600 I St., Washington, D. C. He became ill a week or two previously with heart disease while at his winter home on Jekyll Island, Ga., and was removed to Washington. Mr. Porter possessed a natural inclination for mechanics, and when a young man became a builder of light locomotives. His father was also a locomotive builder and for years prominent as a member of Dilworth, Porter

& Co. The firm was Smith & Porter from 1866 to 1871, when Arthur Bell became a partner, and the style was changed to Porter, Bell & Co. In 1878 it was again changed to H. K. Porter & Co., remaining so until 1890, when it became the H. Kirke Porter Company, Mr. Porter being president. In 1902 he was elected to Congress and served one term. He was a member of many charitable and religious organizations, and was also active in industrial and civic movements.

Financial News

New Financial Corporations.

Fla., Key West.—Bank of Key West will take charter with \$100,000 capital; M. J. Noble interested.

Ga., Atlanta.—Co-operative Development & Home Building Assn., capital \$1,000,000, organized with Jos. A. Mahoney, Pres.

Ky., Scottsville.—People's State Bank, capital \$50,000, organized with Arthur Hobdy, Pres.; J. R. Myers, V. P.

Okla., Ames.—Farmers' State Bank, capital \$10,000, inceptd. with E. T. Golytry, C. W. Golytry; both Enid, Okla.; S. R. Bowman, Ames, Okla.

Okla., Duncan.—Duncan Building and Loan Assn., capital \$200,000, inceptd. with G. L. Wilson, J. B. Hines, R. Henry Brown.

Okla., Holdenville.—Holdenville Building and Loan Assn., capital \$100,000, inceptd. with C. O. Lucas, John W. Lowe, S. W. Campbell.

Tex., Dallas.—Fidelity Loan & Savings Co., capital \$25,000, inceptd. with J. W. Halsell, E. W. Morton, T. E. Jackson.

New Securities.

Ala., Albany—School.—May vote on \$300,000 school bonds; E. C. Payne, Mayor.

Ala., Anniston—School.—Will receive bids Apr. 26 on \$250,000 of 5 per cent semi-annual school bonds, dated Feb. 1, 1921; H. B. Ruddill, Mayor.

Ala., Dothan—School.—Sold \$100,000 of 6 per cent semi-annual \$1000 denomination 20-year school bonds to Weil Roth Co., Cincinnati, O.; R. W. Lisenby, City Clk. (Lately noted in viting bids.)

Ala., Opelika—Road.—Lee County will sell \$25,000 road warrants. Address County Commissioners.

Ark., Fayetteville—Street.—Will receive bids until May 2 on \$75,000 bonds of East St. Improvement Dist.; T. L. Hart, Secy.

Ark., McGehee—Levee.—Sold \$400,000 of 6 per cent semi-annual levee bonds of Southeast Arkansas Levee Dist. to Bankers Trust Co., Little Rock, Ark., at 90; H. Thane, Secy. Dist. (Lately noted inviting bids.)

Fla., Bradenton—School.—Voted \$105,000 of 6 per cent \$1000 denomination bonds; B. D. Gullett, Supt. Public Instruction. (Lately noted to vote.)

Fla., Bradenton—Road and Bridge.—Manatee County will receive bids until May 9 on \$160,000 of Gulf Shore Special Road and Bridge Dist. bonds; 6 per cent semi-annual \$1000 denomination; W. P. Frier, Chrnn. County Comms.

Fla., Fort Pierce—School.—St. Lucie County

(Continued on Page 122.)

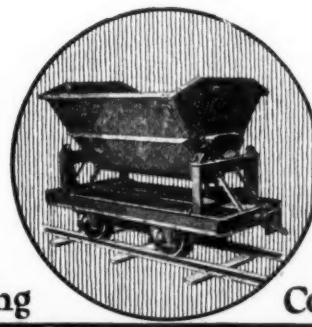


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Attractive Reductions in Cost of Handling Phosphate

Attractive reductions in cost of handling acid phosphate are being effected by many large fertilizer plants. The American Agricultural Chemical Co., for instance, finds that it *pays* to unload raw materials and load fertilizer with three Lakewood storage battery trucks.

Facts and figures on reducing fertilizer costs with Lakewood methods and machines are available to interested executives.



The Lakewood Engineering

Company, Cleveland U.S.A.

(Continued from Page 120.)

Fla., \$30,000 bonds of Vero Dist. Address Board of Education. (Lately noted to vote.)

Fla., Miami—School.—Dade County will receive bids until May 5 on \$45,000 of 6 and 6½ per cent school bonds; Chas. M. Fisher, Supt. Board Public Instruction. (Lately noted voting bonds.)

Fla., St. Petersburg—Gas, Railway and Municipal Building.—Voted \$260,000 bonds, including \$175,000 gas, \$65,000 railway and \$20,000 municipal building. Address The Mayor. (Lately noted to vote.)

Fla., Tampa—School.—Hillsborough County will receive bids until May 19 on \$350,000 of 5 per cent school bonds; J. E. Knight, Supt. Public Instruction. (Lately noted voting.)

Ga., Abbeville—Road.—Wilcox County voted \$100,000 road bonds. Address County Comms. Roads and Revenues. (Lately noted to vote.)

Ga., Bibb City (P. O. Columbus)—Street, Light and Sewer.—Will sell \$150,000 improvement bonds. Address The Mayor. (Lately noted to vote.)

Md., Cambridge—Road.—Dorchester County will receive bids until May 20 on \$60,000 lateral road bonds; 5½ per cent; semi-annual; \$500 denomination; Wm. H. Leonard, Jr., Clk. County Comms.

Miss., Aberdeen—Road.—Monroe County will vote May 2 on \$100,000 road bonds of Dist. No. 5; G. S. Clopton, Election Commr.

Miss., Grenada.—Grenada County received bids Apr. 18 on \$300,000 of 6 per cent \$1000 denomination bonds of Supvrs. Dists. Nos. 1, 2, 3 and 4; J. B. Keeton, Clk. County Supvrs.

Miss., Pascagoula—Road.—Jackson County will receive bids until June 6 on \$180,000 of 6 per cent semi-annual \$1000 denomination bonds of Dist. No. 4, dated July 1, 1921, and \$12,000 of 6 per cent semi-annual \$1000 denomination bonds of Dist. No. 3, dated July 1, 1921. Address Board of Supvrs. (Lately noted voted.)

Miss., Pascagoula—Road.—Jackson County will vote Apr. 30 on \$95,000 bonds of Supvrs. Dist. No. 2; Wm. D. Bullard, Election Commissioner. (Superseded recent item.)

Miss., Senatobia—School.—Independence Consolidated School Dist. received bids Apr. 19 on \$12,000 of 6 per cent semi-annual school bonds, dated June 1, 1920; Ira G. Allen, Supt. Education.

Miss., Tunica—Road.—Tunica County sold \$124,000 of 6 per cent Dundee Road Dist. bonds to I. B. Tigrett & Co., Jackson, Miss., at par and accrued interest. Address County Comms.

Mo., Bonnville—School.—Sold \$40,000 of 5½ or 6 per cent school bonds to Pape, Potter & Kauffman, St. Louis, Mo.; Wm. Mittelbach, Secy. Board of Education. (Lately noted inviting bids.)

Mo., Bonnville—School.—Sold \$40,000 of 5½ or 6 per cent Bonnville School Dist. bonds to Bunceton Bank, Bunceton, Mo.; Wm. Mittelbach, Secy. Board of Education. (Lately noted inviting bids.)

Mo., Delta—School.—Will receive bids until May 10 on \$8000 of 6 per cent \$500 denomination 16-year school bonds, dated May 2, 1921; J. E. Robinson in charge. (Lately noted voting bonds.)

Mo., Elsberry—School.—Will receive bids until Apr. 29 on \$20,000 of 5½ per cent school bonds, maturing serially from 1925 to 1938, inclusive; W. R. Cannon, Secy. School Dist.

Mo., Higginsville — Water, Electric and Funding.—Sold \$12,000 water and light and \$13,500 funding bonds to Prescott & Snider, Kansas City, Mo.; 6 per cent, \$500 denomination, dated Apr. 1, 1921. Address The Mayor.

N. C., Brevard — School.—Transylvania County will receive bids until Apr. 28 on \$15,000 of 6 per cent semi-annual Cathay's Creek Township School Dist. No. 3 bonds, dated Mch. 13, 1921; Edwin Poor, Chrmn. County Board of Education. (Lately noted voting.)

N. C., Charlotte—Road.—Mecklenburg County voted \$2,000,000 road bonds. Address County Comms. (Lately noted to vote.)

N. C., Danbury—Road.—Stokes County will vote May 16 on \$355,000 of 6 per cent road bonds; N. Earl Wall, Clk. County Comms.

N. C., Gaston—Road and Bridge.—Gaston County will receive bids May 2 on \$100,000 of 6 per cent semi-annual 25-year road and bridge bonds; L. E. Rankin, Clk. County Comms.

N. C., High Point—Refunding.—Sold \$175,000 of 6 per cent semi-annual \$1000 denomination funding bonds, dated Apr. 15, 1921, to Wm. R. Compton Co., New York, at premium of \$175; Ed. R. Ragan, City Secy. (Lately noted inviting bids.)

N. C., Nashville—Road.—Nash County will receive bids until May 19 on \$20,000 Dry Wells township road bonds; 6 per cent; 20-year; W. T. Valentine, Chrmn., Middlesex, N. C.

N. C., Newton — Road.—Catawba County voted \$500,000 road bonds. Address County Comms. (Lately noted to vote.)

N. C., Salisbury—Road and Bridge.—Rowan County sold \$100,000 of 6 per cent road and bridge notes, dated Apr. 7, 1921, to R. M. Grant & Co., New York. Address County Comms.

N. C., Walnut—School.—Will vote May 7 on \$25,000 Walnut School Dist. bonds. Address Board of Education.

N. C., Waynesville—Road and Bridge.—Haywood County sold \$100,000 of 6 per cent semi-annual 10-29 year road and bridge bonds, dated Mch. 1, 1921, to Powell, Garard & Co., Chicago, Ill., at par; G. N. Henson, Register of Deeds. (Lately noted inviting bids.)

N. C., Winton — School.—Hertford County will receive bids until May 16 on \$25,000 of 6 per cent \$1000 denomination 20-year school bonds of Murfreesboro Graded School Dist. No. 1, dated June 1, 1921; J. A. Northcott, Secy. Comms.

Okl., Kaw City—Electric and Water.—Will vote May 6 on \$35,000 electric and water bonds. Address The Mayor.

Okl., Okmulgee—Road.—Okmulgee County sold \$568,000 of 5 per cent semi-annual road bonds to American State Bank and Central National Bank; Grace E. Morton, Clk. (Lately noted inviting bids.)

S. C., Anderson—Road.—Anderson County sold \$75,000 of 5½ and 6 per cent semi-annual \$1000 road bonds to Sidney Spitzer Co., Toledo, O.; W. C. Austin, Secy. Highway Coms. (Lately noted inviting bids.)

S. C., Camden—School.—Kershaw County School Dist. No. 1 sold \$160,000 of 6 per cent semi-annual bonds of School Dist. No. 1 to Sidney, Spitzer & Co., Toledo, O.; Thos. J. Kirkland, Chrmn. Board Trustees. (Lately noted inviting bids.)

S. C., Columbia — Road.—Richland County will receive bids until May 17 on \$2,000,000 road bonds. Address Permanent Good Roads Coms. (Lately noted.)

S. C., Florence—Highway.—Florence County sold \$100,000 of 6 per cent semi-annual highway bonds, dated May 1, 1921, to Citizens Bank of Timmonsville, Timmonsville, S. C., for \$500 premium; S. R. Phillips, Supt. County Highway Coms. (Lately noted inviting bids.)

S. C., Kingtree—Street, Water and Sewer.—Sold \$200,000 street, sewer and water bonds to Atlanta concern. Address The Mayor. (Lately noted inviting bids.)

S. C., Rock Hill — Street.—Sold \$100,000 of street bonds to Toledo firm at par and accrued interest. Address The Mayor. (Lately noted.)

S. C., Spartanburg—Highway.—Spartanburg County sold \$45,000 of 5 per cent semi-annual 20-year highway bonds to Security Trust Co.; John A. Law, Chrmn. Highway Coms. (Lately noted inviting bids.)

S. C., York—School.—Will receive bids until May 17 on \$125,000 of 6 per cent semi-annual \$1000 denomination 20-yr. Yorkville School Dist. No. 11 bonds, dated June 1, 1921; changed date from April 29; Geo. W. Williams, Secy. Treas. (Lately noted.)

Tenn., Byrdstown—Road.—Pickett County voted \$50,000 road bonds. Address County Comms.

Tenn., Friendship.—Will vote on \$6000 school bonds. Address The Mayor.

Tenn., Johnson City.—Will receive bids until May 4 on \$150,000 of 6 per cent semi-annual 20-year school bonds; T. H. McNeil, City Recorder.

Tenn., Lawrenceburg—Street.—Will receive bids until Apr. 25 on \$50,000 of 6 per cent semi-annual street bonds, dated Apr. 25, 1921; E. E. McNely, Commr. of Finance.

Tenn., Martin—Light and Water.—Sold \$100,000 water and light bonds; Frank L. Wilcox, Engr., Chemical Bldg., St. Louis, Mo.

Tenn., Morristown—Highway and Funding. Hamblen County will receive bids until Apr. 30 on \$25,000 highway and \$44,000 funding bonds; 6 per cent, 10-30-year, dated Apr. 1, 1921; J. G. Templin, Clerk County Court.

Tenn., Murfreesboro — Refunding.—Will receive bids until May 28 on \$100,000 of 6 per cent semi-annual 15-year refunding bonds; J. E. Stockard, City Secy.

Tenn., Nashville—School.—Davidson County issued \$100,000 school bonds. Address County Supt. Schools.

Tenn., Rutledge—Road.—Grainger County receive bids until May 7 on \$35,000 of 6 per cent road bonds; J. M. Grove, County Clerk.

Tex., Anahuac — Road.—Chambers County will vote on \$60,000 bonds. Address County Comms.

Tex., Austin—School.—State Board of Education purchased \$197,300 school bonds of Independent School Dists.; Miss Blanton, State Supt. Public Instruction. (Lately noted.)

Tex., Ballinger — Light and Water.—Voted \$75,000 bonds, including \$65,000 light and \$10,000 water. Address City Coms. (Lately noted to vote.)

Tex., Brownfield—School.—Brownfield Independent School Dist. registered \$12,000 of 5 per cent 20-40-year bonds with State Comptroller. Address District School Trustees.

Tex., Brownsville—School.—Voted \$175,000 bonds of Independent School Dist. Address Board of Education.

Tex., Center—Sewer and Water.—Will vote May 27 on \$100,000 water and sewer bonds. Address The Mayor.

Tex., Cisco — School.—Cisco Independent School Dist. registered \$250,000 of 5 per cent 10-40-year school bonds with State Comptroller. Address District School Trustees.

Tex., Comanche—Sewer.—Will receive bids until Apr. 25 on \$20,000 of 6 per cent \$1000 denomination sewer bonds, dated Apr. 20, 1921; James R. Eaves, Mayor. (Lately noted voting bonds.)

Tex., Corpus Christi—Breakwater.—Voted \$100,000 breakwater bonds. Address The Mayor. (Lately noted to vote.)

Tex., Crowell—School.—Crowell Independent School Dist. registered \$10,000 of 5 per

(Continued on Page 124.)

Excerpts From The Seventieth Annual Report of Louisville & Nashville Railroad Company

Year Ended December 31, 1920

TABLE No. I.
INCOME ACCOUNT.

Standard Return for Use of Roads, January and February, 1920.....	\$2,885,082.44
Additional Compensation, January and February, 1920:	
Interest on Additions and Betterments—Road.....	\$46,810.15
Interest on Equipment.....	99,148.30

146,258.45

Railway Operating Income Guaranteed under Sec. 209,

Transportation Act, 1920: March to August, 1920, inclusive.....

9,194,718.59

Railway Operating Income, September to December, 1920,

inclusive:

Railway Operating Revenues, \$4,685,982.47

Railway Operating Expenses, 93.88 per cent.....

41,949,752.85

Net Revenue from Railway Operations, 6.12

per cent.....

\$2,736,229.62

Railway Tax Accruals.....

\$1,184,128.28

Uncollectible Railway Revenues.....

282.86

1,184,421.14

Total Operating Income.....

\$1,551,808.48

Hire of Freight Cars—Credit Balance.....

\$610,992.11

Rent from Locomotives.....

12,225.95

Rent from Passenger-Train Cars.....

25,156.56

Rent from Work Equipment.....

4,532.42

Joint Facility Rent Income.....

90,912.15

741,176.19

Deduct:

Rent for Locomotives.....

\$1,904.87

Rent for Passenger-Train Cars.....

31,462.34

Rent for Work Equipment.....

945.60

Joint Facility Rents.....

198,751.72

233,064.53

2,062,920.14

Non-operating Income, January to December, 1920, inclusive:

Income from Lease of Road:

Clarksville and Princeton Branch.....

\$12,039.70

Paducah and Memphis Division.....

206,506.20

Marbleton Branch.....

4,000.00

292,515.90

Miscellaneous Rent Income.....

41,366.84

Miscellaneous Non-Operating Physical Property.....

158,446.71

TABLE No. III.
GENERAL BALANCE SHEET.

Assets.

INVESTMENTS:

Investment in Road and Equipment—

Road.....

\$234,035,186.87

Equipment.....

77,079,210.78

(Table VI).....

\$312,014,397.65

Improvements on Leased Rwy. Property (Table VI).....

1,888,084.53

Sinking Funds.....

—

Total Book Assets.....

\$1,639,162.62

Bonds this Company's Issue (Table V).....

1,558,000.00

81,162.62

Miscellaneous Physical Property in Affiliated Companies:

(a) Stocks:

In Treasury (Table V).....

\$5,412,566.66

Pledged (Table V).....

14,912,200.85

(b) Bonds (Table V).....

2,953,019.15

(c) Notes.....

1,407,147.97

(d) Advances.....

1,720,754.35

Other Investments:

(a) Stocks (Table V).....

\$491,635.58

(b) Bonds (Table V).....

7,116,356.92

(c) Notes.....

205,159.25

26,436,688.98

7,813,451.75

CURRENT ASSETS:

Cash.....

—

\$352,543,977.26

Special Deposits:

Total Book Assets.....

\$630,200.80

Bonds this Company's Issue (Table V).....

500,000.00

Stock (Table V).....

\$5.00

Cash.....

130,195.80

130,200.80

Loans and Bills Receivable.....

214,552.19

Traffic and Other Service Balance Receivable.....

3,625,000.00

Net Balance Receivable from Agents and Conductors.....

1,119,518.51

Miscellaneous Accounts Receivable.....

6,229,755.09

Material and Supplies.....

17,658,120.27

Interest and Dividends Receivable.....

208,480.69

Rents Receivable.....

29,248.55

Other Current Assets.....

753,339.91

Due from United States Government:

Federal Control Period.....

\$12,363,553.52

Guaranty Period.....

7,663,296.49

19,966,850.01

DEFERRED ASSETS:

Working Fund Advances.....

—

Other Deferred Assets:

Southern Railway Company's Proportion of Bonds Issued Jointly

\$5,913,500.00

Other Accounts.....

1,165,701.40

7,079,201.40

7,137,155.17

UNADJUSTED DEBITS:

Other Unadjusted Debts:

United States Government—Material and Supplies, December 31, 1917.....

\$9,601,167.68

Other Accounts.....

3,740,331.92

13,341,499.60

Securities Issued or Assumed—Unpledged (Table V).....

\$23,067,315.33

Securities Issued or Assumed—Pledged (Table V).....

17,129,000.00

5,000,000.00

5,000,000.00

GRAND TOTAL.....

\$135,103,851.18

Dividend Income:	
Chicago, Indianapolis & Louisville Railway Stock.....	\$157,149.06
Nashville, Chattanooga & St. Louis Railway Stock.....	803,887.00
Sundry Stocks.....	118,308.00
From Stocks held under Georgia Railroad Lease.....	73,083.00
	1,152,127.06
Income from Funded Securities:	
Sundry bonds and notes maturing more than one year after date.....	\$451,330.27
From bonds held under Georgia Railroad Lease.....	620.00
	451,950.27
Income from Unfunded Securities and Accounts.....	558,002.68
Income from Sinking Funds.....	179.77
	5,288,219.23

GROSS INCOME.....

DEDUCTIONS FROM GROSS INCOME:

Bent for Leased Roads:

Nashville & Decatur Railroad, \$134,867.49

Rents of Other Roads.....

33,821.81

Miscellaneous Rents.....

26,215.80

Miscellaneous Tax Accruals.....

19,530.00

Interest on Funded Debt.....

8,114,521.53

Interest on Unfunded Debt.....

26,325.80

Corporate Expenses, January and February, 1920.....

65,475.46

Federal Tax, January and August, 1920, inclusive.....

565,003.89

Miscellaneous Income Charge:

Accrued premiums on bonds drawn for sinking funds.....

229,107.50

U. S. Income Tax paid on Interest on Tax-Exempt Bonds.....

37,575.84

Total Deductions from Gross Income.....

57,682.34

Total Deductions from Gross Income.....

9,013,548.63

Net Income.....

DISPOSITION OF NET INCOME:

Income applied to Sinking Funds.....

\$91,651.82

Miscellaneous Appropriations of Income.....

10,630.78

Total Appropriations.....

105,282.60

Income Balance Transferred to Credit of Profit and Loss.....

\$7,758,368.22

TABLE III.
GENERAL BALANCE SHEET.

Liabilities.

Stocks:

Capital Stock:

Full shares outstanding.....

\$71,917,200.00

Fractional shares outstanding.....

720.00

Original stock and subsequent stock dividends unissued.....

82,080.00

\$72,000,000.00

Premium on Capital Stock.....

12,116.76

GOVERNMENTAL GRANTS:

Grants in Aid of Construction.....

10,995.62

LONG-TERM DEBT:

Book Liability:

Funded Debt—Unmatured.....

\$225,520,515.33

Held by or for this Company (Table V):

In Treasury.....

\$225,520,515.33

In Sinking Fund.....

1,578,000.00

Deposited as Collateral.....

17,129,000.00

Special Deposit.....

500,000.00

42,254,315.33

Actually outstanding (Table IV).....

\$183,266,170.00

Liability of Southern Railway Co. for Bonds Issued Jointly with this Company.....

5,913,500.00

\$183,170,670.00

Non-Negotiable Debt to Affiliated Companies—Open Accounts.....

321,673.43

189,504,313.43

CURRENT LIABILITIES:

Traffic and Service Payables.....

\$1,020,155.79

Audited Accounts and Wages Payable.....

13,165,653.17

Miscellaneous Accounts Payable.....

946,308.32

Interest Payable, Unpaid.....

1,915,732.00

Dividends Matured.....

12,500.00

Funded Debt Matured, Unpaid (Table IV).....

37,000.00

Unmatured Interest Accrued.....

2,520,000.00

Unmatured Rents Accrued.....

14,702.66

Other Current Liabilities.....

1,015,916.15

22,071,962.57

DEFERRED LIABILITIES:

Other Deferred Liabilities.....

21,944.06

UNADJUSTED CREDITS:

Tax Liability.....

\$2,019,207.16

(Continued from Page 122.)

cent 20-40-year school bonds with State Comptroller. Address District School Trustees.

Tex., Dalhart—School.—Dalhart Independent School Dist. registered \$125,000 of 5 per cent 25-40-year school bonds with State Comptroller. Address District School Trustees.

Tex., Dallas—Road.—Dallas County will sell \$2,700,000 Dist. No. 1 road bonds; Chas. E. Gross, County Auditor.

Tex., Eastland—School.—Will vote May 5 on \$50,000 school bonds. Address Board of Education.

Tex., Forney—School.—Forney Independent School Dist. registered \$60,000 of 5 per cent 5-40-year school bonds with State Comptroller. Address District School Trustees.

Tex., Laredo—Road.—Webb County will receive bids until Apr. 30 on \$290,000 of 5 per cent semi-annual road bonds; T. R. Spence, County Engr.

Tex., Ladonia—School.—May vote on \$50,000 school bonds. Address Board of Education.

Tex., La Grange—Road.—Fayette County voted \$100,000 road bonds. Address County Commsrs. (Lately noted to vote.)

Tex., Palestine—School.—Palestine Independent School Dist. will vote May 14 on

\$115,000 school bonds. Address Board of Trustees.

Tex., Rusk—Road.—Cherokee County will vote May 17 on road bonds. Address County Commsrs.

Tex., Wichita Fall—Road.—Wichita County will receive bids until Apr. 25 on \$1,450,000 of 5 per cent \$1000 denomination 30-yr. road bonds, dated Oct. 1, 1919; W. W. Murphy, County Auditor.

W. Va., Philippi—School.—Will receive bids until May 3 on \$90,000 of 6 per cent 5-30-year school bonds; E. L. Bartlett, Secy. Board of Education. (Lately noted voting.)

W. Va., Welch—Street.—Will receive bids until May 16 in \$3,000 street bonds; 6 per cent \$500 denomination; Paul W. Jones, Recorder.

Financial Notes.

Savings and Loan Corp., Roanoke, Va., increases capital to \$30,000.

First National Bank, Lake Worth, Fla., will increase capital to \$60,000.

Holland Banking Co., Springfield, Mo., increases capital from \$250,000 to \$300,000.

Sutherlin, Barry & Co., Inc., have opened offices in the Whitney-Central Bldg., New Orleans, for the transaction of a general municipal securities business.

Averill Tilden has been elected trustee of the Equitable Trust Co. of New York. He is president of Edward Tilden & Co., bankers, Chicago, and is also connected with other financial concerns of that city.

MARCH, 1921, ISSUE JUST PUBLISHED

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